United States Department of Agriculture

Natural Resources Conservation Service

In cooperation with Tennessee Agricultural Experiment Station, Tennessee Department of Agriculture, Roane County Board of Commissioners, and Roane County Soil Conservation District

Soil Survey of Roane County, Tennessee

How To Use This Soil Survey

General Soil Map

The general soil map, which is a color map, shows the survey area divided into groups of associated soils called general soil map units. This map is useful in planning the use and management of large areas.

To find information about your area of interest, locate that area on the map, identify the name of the map unit in the area on the color-coded map legend, then refer to the section **General Soil Map Units** for a general description of the soils in your area.

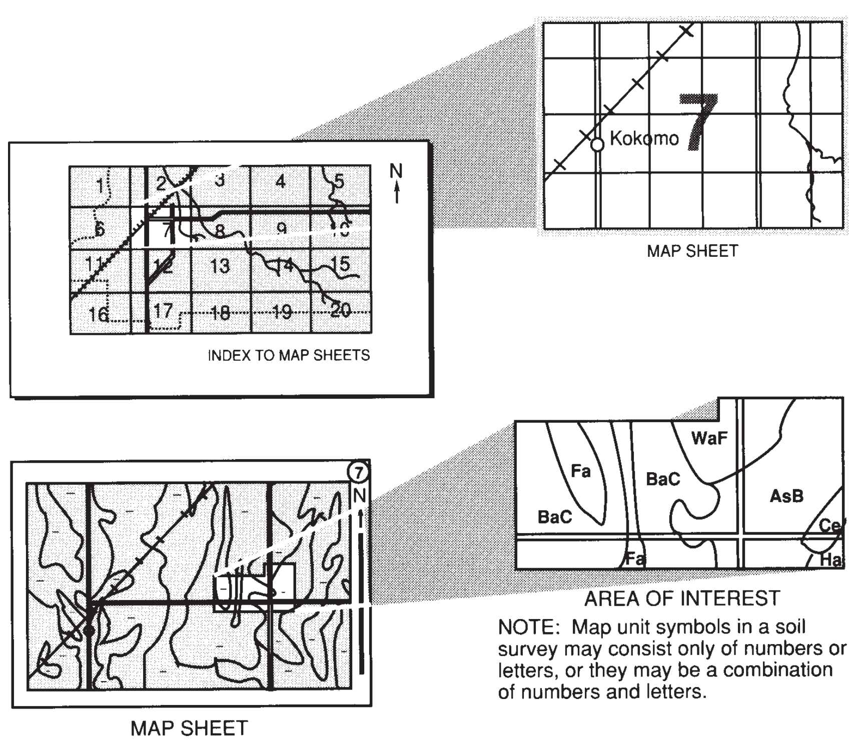
Detailed Soil Maps

The detailed soil maps can be useful in planning the use and management of small areas.

To find information about your area of interest, locate that area on the **Index to Map Sheets**. Note the number of the map sheet and go to that sheet.

Locate your area of interest on the map sheet. Note the map unit symbols that are in that area. Go to the **Contents**, which lists the map units by symbol and name and shows the page where each map unit is described.

The **Contents** shows which table has data on a specific land use for each detailed soil map unit. Also see the **Contents** for sections of this publication that may address your specific needs.



This soil survey is a publication of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (formerly the Soil Conservation Service) has leadership for the Federal part of the National Cooperative Soil Survey.

Major fieldwork for this soil survey was completed in 2002. Soil names and descriptions were approved in 2002. Unless otherwise indicated, statements in this publication refer to conditions in the survey area in 2002. This survey was made cooperatively by the Natural Resources Conservation Service, the Tennessee Agricultural Experiment Station, the Tennessee Department of Agriculture, the Roane County Board of Commissioners, and the Roane County Soil Conservation District. The survey is part of the technical assistance furnished to the Roane County Soil Conservation District.

Soil maps in this survey may be copied without permission. Enlargement of these maps, however, could cause misunderstanding of the detail of mapping. If enlarged, maps do not show the small areas of contrasting soils that could have been shown at a larger scale.

Cover: Dewey soils are in the foreground. Shady soils are on the stream terraces. Armuchee, Townley, and Montevallo soils are on the wooded ridges in the center of the photograph. Gilpin, Bouldin, and Petros soils are on the Cumberland Mountains in Anderson County in the background.

Additional information about the Nation's natural resources is available online from the Natural Resources Conservation Service at http://www.nrcs.usda.gov.

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Issued 2009

Foreword

Soil surveys contain information that affects land use planning in survey areas. They include predictions of soil behavior for selected land uses. The surveys highlight soil limitations, improvements needed to overcome the limitations, and the impact of selected land uses on the environment.

Soil surveys are designed for many different users. Farmers, ranchers, foresters, and agronomists can use the surveys to evaluate the potential of the soil and the management needed for maximum food and fiber production. Planners, community officials, engineers, developers, builders, and home buyers can use the surveys to plan land use, select sites for construction, and identify special practices needed to ensure proper performance. Conservationists, teachers, students, and specialists in recreation, wildlife management, waste disposal, and pollution control can use the surveys to help them understand, protect, and enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. The information in this report is intended to identify soil properties that are used in making various land use or land treatment decisions. Statements made in this report are intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://soils.usda.gov/sqi/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (http://offices.sc.egov.usda.gov/locator/app?agency—nrcs) or your NRCS State Soil Scientist (http://soils.usda.gov/contact/state_offices/).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

These and many other soil properties that affect land use are described in this soil survey. The location of each map unit is shown on the detailed soil maps. Each soil in the survey area is described, and information on specific uses is given. Help in using this publication and additional information are available at the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

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Soil Survey of
Roane County, Tennessee

By Harry C. Davis and Jennifer R. Yaeger, Natural Resources Conservation Service

Fieldwork by Harry C. Davis and Jennifer R. Yaeger, Natural Resources Conservation Service, and Danny Inman, Roane County

United States Department of Agriculture, Natural Resources Conservation Service,
in cooperation with
Tennessee Department of Agriculture, Tennessee Agricultural Experiment Station,
Roane County Board of Commissioners, and Roane County Soil Conservation District

Roane County lies near the center of eastern Tennessee (fig. 1). It is bordered by Morgan and Anderson Counties to the north, by Cumberland and Rhea Counties to the west, by Loudon, Meigs, and McMinn Counties to the south, and by Loudon and Knox Counties to the east. The county is generally 25 miles long and 15 miles wide. It lies in a northeast-southeast direction. It is in two separate physiographic provinces. The majority of the county, (approximately three-quarters) lies within Major Land Resource Area 128, Southern Appalachian Ridges and Valleys, and a minor portion (approximately one-quarter) lies within Major Land Resource Area 125, Cumberland Plateau and Mountains. The Southern Appalachian Ridges and Valleys are defined by alternating ridges and valleys that lie in a northeast-southwest direction. The Cumberland Plateau area is approximately 700 to 800 feet higher in elevation than the Southern Appalachian Ridges and Valleys. Mount Roosevelt is the highest point in the county, at 2,000 feet above sea level, and is located in the Cumberland Plateau portion of the county.

There are five towns in the county: Kingston, Harriman, Rockwood, Oliver Springs, and a small portion of Oak Ridge. Kingston, one the oldest cities in Tennessee, was founded in 1799 and was the State capital for one day, September 21, 1807. It is the county seat.

General Nature of the Survey Area

This section gives general information about the county. It describes the settlement; physiography, geology, and relief; transportation; and climate of the survey area.

Settlement

Like many counties in the Tennessee area, what is now Roane County was once used as hunting grounds and settlements for the Woodland Indians. Along the banks of the Tennessee and Clinch Rivers, evidence of the Woodland Indians has been found through excavations. The site of a Woodland Indian village was discovered 8 miles south of the confluence of the Clinch and Tennessee Rivers. Around 500 to 1200 A.D. the Mississippian Indians migrated to the Tennessee area (Pickel, 1981). They

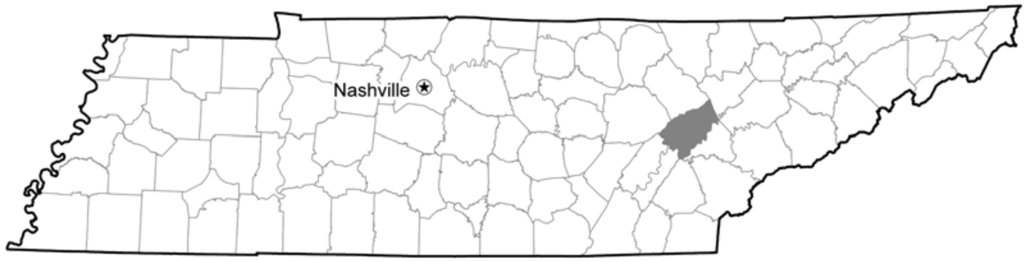

Figure 1.—Location of Roane County in Tennessee.

were well known for building temple mounds. At one time 19 mounds and several villages belonging to the Mississippian Indian culture were located in the survey area. However, it was the Cherokee who settled in the area until the coming of the first white settlers.

In the late 1700's, the long battle for land between the Native Americans and the white settlers spanned over 28 years and produced five treaties. The Native Americans were eventually driven from their lands. During this time pioneers established a stronghold along the Clinch River in the survey area. It was called Southwest Point and would later be the town of Kingston.

Roane County, being drained by three rivers, the Emory, Clinch, and Tennessee, became a resource itself for the transportation of goods. Iron, coal, timber, and agricultural products were carried by barge, flatboat, or steamboat as early as 1835. After the Civil War, the establishment of railroads through the area helped to increase Roane County's availability to carry its resources to many new places. In 1890, the town of Harriman was founded by Frederick Gates of the East Tennessee Land Company. Gates who was a pastor and realtor wanted to establish a community based on temperance and prohibition. Lots in Harriman were sold in what was termed "The Great Land Sale" in February 1890 (Hall and Shelby, 1986). Harriman was not only founded for personal beliefs but was also influenced by industrialists who came from the north after the Civil War in search of lucrative business opportunities. It would eventually become the home of 29 manufacturing companies and would survive the Panic of 1893 and a major flood in 1902. Rockwood, which was also a part of the industrial revolution, was founded solely on the production of pig iron. John Wilder and associates began the Roane Iron Company in 1867 and the village of Rockwood in 1868 (Hall and Shelby, 1986). The Roane Iron Company was the first in the south to use coke rather than charcoal to produce pig iron. The market for pig iron soon became unstable, especially with the use of steel rather than iron for rails. Since Rockford was based on a single industry, as the company's revenue changed so did the economy of the city.

One small town on the border of Roane, Morgan, and Anderson Counties was named in honor of Richard Oliver, a postmaster and inn owner. Oliver would carry people to the town's natural mineral springs, which were touted to be cures for all types of illnesses and sources of longevity. Not only did Oliver Springs rely heavily on the tourist travel in the early 1900's but it also depended on the economic growth of the timber industry and especially the coal industry.

Today, Roane County does not rely on pig iron or coal like it used to. It still relies on the timber industry as well as other types of manufacturing and also on recreation. The number of farms is becoming fewer, and farmland is giving way to new suburban areas in the county.

Physiography, Geology, and Relief

Roane County consists of two very different physiographic areas. Approximately 32,160 acres of the county is within the Cumberland Plateau portion of Major Land Resource Area 125 (Cumberland Plateau and Mountains) in a mesic temperature regime. The remaining 220,500 acres lies in a thermic temperature regime in Major Land Resource Area 128 (Southern Appalachian Ridges and Valleys). The portion that is on the Cumberland Plateau is dominated by gently dipping, Pennsylvanian-age, interbedded sandstone, siltstone, coal, and shale. It is 700 to 800 feet higher in elevation that the ridge and valley portion. Mount Roosevelt is the highest point of elevation, rising 2,000 feet above sea level, and is located on the Cumberland Plateau.

Transportation

Roane County is intersected east to west by Interstate 40 and has several major State highways. State Highway 27 runs along the western portion of the county from north to south. State Highway 61 runs from Harriman to Oliver Springs. State Highway 58 intersects the county from south to north. State Highway 70 transects the county from east to west.

The county also contains two railroads, Norfolk Southern (NS) and CSX Railroads. They still transport coal.

Climate

Table 1 gives data on temperature and precipitation for the survey area as recorded at Rockwood, Tennessee, in the period 1971 to 2000. Some of the information in the following paragraphs is from Kingston, Tennessee, where only precipitation was recorded. Table 2 shows probable dates of the first freeze in fall and the last freeze in spring. Table 3 provides data on length of the growing season.

In winter, the average temperature is 37.8 degrees F and the average daily minimum temperature is 27.0 degrees. The lowest temperature on record, which occurred on January 31, 1966, is -12.0 degrees. In summer, the average temperature is 74.3 degrees and the average daily maximum temperature is 86.1 degrees. The highest recorded temperature, which occurred on July 17, 1980, is 107 degrees.

Growing degree days are shown in table 1. They are equivalent to “heat units.” During the month, growing degree days accumulate by the amount that the average temperature each day exceeds a base temperature (50 degrees F). The normal monthly accumulation is used to schedule single or successive plantings of a crop between the last freeze in spring and the first freeze in fall.

The total annual precipitation is 60.1 inches in Rockwood and 53.49 inches in Kingston. Of the total at Rockwood, 32.29 inches, or about 54 percent, usually falls in April through October. The growing season for most crops falls within this period. In 2 years out of 10, the rainfall in April through October is less than 51.49 inches. The heaviest 1-day rainfall during the period of record was 6.79 inches at Rockwood and 4.81 inches in Kingston, both on May 28, 1973. Thunderstorms occur on about 47 days each year, and most occur between May and August.

The average seasonal snowfall is about 4 inches. The greatest snow depth at any one time during the period of record was 14 inches. On the average, 7 days of the year have at least 1 inch of snow on the ground. The number of such days varies greatly from year to year. The heaviest 1-day snowfall on record was more than 14 inches.

The average relative humidity in mid-afternoon is about 60 percent. Humidity is higher at night, and the average at dawn is about 88 percent. The sun shines 64

percent of the time possible in summer and 42 percent in winter. The prevailing wind is usually from the northeast; it is from the southwest from April to July. Average windspeed is highest, 9 miles per hour, in March and April.

How This Survey Was Made

This survey was made to provide information about the soils and miscellaneous areas in the survey area. The information includes a description of the soils and miscellaneous areas and their location and a discussion of their suitability, limitations, and management for specified uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They dug many holes to study the soil profile, which is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

The soils and miscellaneous areas in the survey area are in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept or model of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For

example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

General Soil Map Units

The general soil map in this publication shows broad areas that have a distinctive pattern of soils, relief, and drainage. Each map unit on the general soil map is a unique natural landscape. Typically, it consists of one or more major soils or miscellaneous areas and some minor soils or miscellaneous areas. It is named for the major soils or miscellaneous areas. The components of one map unit can occur in another but in a different pattern.

The general soil map can be used to compare the suitability of large areas for general land uses. Areas of suitable soils can be identified on the map. Likewise, areas where the soils are not suitable can be identified.

Because of its small scale, the map is not suitable for planning the management of a farm or field or for selecting a site for a road or building or other structure. The soils in any one map unit differ from place to place in slope, depth, drainage, and other characteristics that affect management.

1. Gilpin-Lily-Petros

Percentage of survey area: 5 percent
Depth class: Shallow and moderately deep to shale or sandstone bedrock
Position on landscape: Broad undulating to highly dissected ridgetops and side slopes
Parent material: Residuum from sandstone, shale, and siltstone

Characteristics of Major Components

Gilpin
Depth class: Moderately deep to sandstone, shale, or siltstone bedrock
Drainage class: Well drained
Permeability: Moderate
Surface layer texture: Loam, silt loam, or their channery analogues
Subsoil texture: Loam, silty clay loam, or their channery analogues
Substratum texture: Clay loam, silty clay loam, or their channery analogues
Slope range: 2 to 35 percent

Lily
Depth class: Moderately deep to sandstone bedrock
Drainage class: Well drained
Permeability: Moderately rapid
Surface layer texture: Loam
Subsoil texture: Loam
Substratum texture: Clay loam
Slope range: 2 to 35 percent

Petros
Depth class: Shallow to shale or siltstone bedrock
Drainage class: Excessively drained
Permeability: Moderate or moderately rapid

Surface layer texture: Silt loam and its channery analogues
Subsoil texture: Silt loam and its channery analogues
Substratum texture: Silt loam and its channery analogues
Slope range: 20 to 80 percent

Minor Components

- Lonewood and Hendon soils, which are fine-loamy and are greater than 60 inches to acid interbedded sandstone and shale; on broad, undulating ridgetops
- Cotaco and Allegheny soils, which are on narrow floodplains
- Pope and Philo soils, which are coarse-loamy and are greater than 60 inches to bedrock; on narrow floodplains

2. Gilpin-Bouldin-Allen

Percentage of survey area: 10 percent
Depth class: Moderately deep and very deep to sandstone bedrock
Position on landscape: Side slopes and footslopes of mountain slopes and escarpments
Parent material: Residuum and colluvium from sandstone, siltstone, and shale bedrock

Characteristics of Major Components

Gilpin
Depth class: Moderately deep to sandstone, shale, or siltstone bedrock
Drainage class: Well drained
Permeability: Moderate
Surface layer texture: Loam or silt loam
Subsoil texture: Loam, silty clay loam, or their channery analogues
Substratum texture: Clay loam, silty clay loam, or their channery analogues
Slope range: 2 to 70 percent

Bouldin
Depth class: Very deep to limestone or shale bedrock
Drainage class: Somewhat excessively drained
Permeability: Moderately rapid
Surface layer texture: Loam, fine sandy loam, or their gravelly, stony, bouldery, flaggy, or cobbly analogues
Subsoil texture: Loam, fine sandy loam, or their gravelly, stony, bouldery, flaggy, or cobbly analogues
Substratum texture: Loam, clay loam, or their gravelly, stony, bouldery, flaggy, or cobbly analogues
Slope range: 25 to 75 percent

Allen
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Surface layer texture: Loam or fine sandy loam
Subsoil texture: Loam, clay loam, or sandy clay loam
Substratum texture: Loam, clay loam, or sandy clay loam; ranging to sandy clay, clay, or silty clay and their gravelly analogues below a depth of 3 feet
Slope range: 5 to 20 percent

Minor Components

- Ealy soils, which are coarse-loamy and greater than 60 inches to bedrock; along narrow floodplains
- Craigsville soils, which are loamy-skeletal and are greater than 60 inches to bedrock; along narrow floodplains

3. Fullerton–Dewey–Waynesboro

Percentage of survey area: 25 percent
Depth class: Deep and very deep to limestone, cherty limestone, or dolomite bedrock
Position on landscape: Ridgetops and side slopes of hillslopes
Parent material: Residuum, colluvium, and alluvium derived from limestone, cherty limestone, or dolomite bedrock

Characteristics of Major Components

Fullerton
Depth class: Very deep to cherty limestone or dolomite bedrock
Drainage class: Well drained
Permeability: Moderate
Surface layer texture: Silt loam or its gravelly analogues
Subsoil texture: Silt loam, loam, or their gravelly analogues
Substratum texture: Clay loam, silty clay loam, silty clay, clay, or their gravelly analogues
Slope range: 20 to 35 percent

Dewey
Depth class: Very deep to limestone bedrock
Drainage class: Well drained
Permeability: Moderate
Surface layer texture: Loam or silt loam
Subsoil texture: Loam, silt loam, or silty clay loam
Substratum texture: Clay or silty clay; in some pedons the upper part is clay loam or silty clay loam
Slope range: 2 to 45 percent

Waynesboro
Depth class: Very deep to bedrock
Drainage class: Well drained
Permeability: Moderate
Surface layer texture: Loam or silt loam
Subsoil texture: Loam, silt loam, or silty clay loam
Substratum texture: Clay or clay loam; ranging to sandy clay
Slope range: 2 to 20 percent

Minor Components

- Etowah soils, which are fine-loamy and very deep to bedrock; on high stream terraces or on footslopes
- Hamblen soils, which are fine-loamy, very deep to bedrock, and moderately well drained; along adjacent floodplains
- Swafford soils, which are fine-loamy, very deep to bedrock, and moderately well drained; on low stream terraces
- Minvale soils, which are fine-loamy, very deep to limestone bedrock, and well drained; on footslopes and colluvial portions of side slopes

4. Montevallo-Armuchee-Townley

Percentage of survey area: 25 percent
Depth class: Shallow to moderately deep to shale, siltstone, and sandstone bedrock
Position on landscape: Ridgetops and side slopes
Parent material: Residuum

Characteristics of Major Components

Montevallo
Depth class: Shallow
Drainage class: Well drained
Permeability: Moderate
Surface layer texture: Silt loam or its channery analogues
Subsoil texture: Silt loam or its channery analogues
Slope range: 5 to 35 percent

Armuchee
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Slow
Surface layer texture: Silt loam, silty clay loam, or their channery analogues
Subsoil texture: Silt loam, silty clay loam, or their channery analogues
Substratum texture: Clay, silty clay loam, silty clay, or their channery analogues
Slope range: 0 to 4 percent

Townley
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Slow to moderate
Surface layer texture: Silt loam or its channery analogues
Subsoil texture: Silt loam, silty clay loam, or their channery analogues
Substratum texture: Silty clay, silty clay loam, or their channery analogues
Slope range: 0 to 4 percent

Minor Components

- None

5. Colbert-Collegedale-Capshaw

Percentage of survey area: 15 percent
Depth class: Moderately deep to very deep to shaly limestone or limestone bedrock
Position on landscape: Ridgetops and side slopes
Parent material: Residuum

Characteristics of Major Components

Colbert
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Slow in the upper part and very slow in the lower part
Surface layer texture: Silt loam
Subsoil texture: Clay
Slope range: 5 to 20 percent

Collegedale
Depth class: Moderately deep

Drainage class: Well drained
Permeability: Slow or very slow
Surface layer texture: Silt loam
Subsoil texture: Silty clay loam or silty clay
Substratum texture: Silty clay
Slope range: 5 to 20 percent

Capshaw
Depth class: Deep or very deep
Drainage class: Moderately well drained
Permeability: Slow or very slow
Surface layer texture: Silt loam
Subsoil texture: Silt loam or silty clay loam
Substratum texture: Clay or silty clay
Slope range: 2 to 5 percent

Minor Components

- Lyerly soils, which formed in residuum, are moderately deep to limestone bedrock, and are moderately well drained

6. Water

Percentage of survey area: 10 percent

7. Area Not Surveyed

Percentage of survey area: 10 percent

Detailed Soil Map Units

The map units delineated on the detailed soil maps in this survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions in this section, along with the maps, can be used to determine the suitability and potential of a unit for specific uses. They also can be used to plan the management needed for those uses.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called non-contrasting, or similar, components. They may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. The contrasting components are mentioned in the map unit descriptions. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans and agronomic interpretations. If intensive use of a small area is planned, an onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives the principal hazards and limitations to be considered in planning for specific uses.

Soils that have profiles that are almost alike make up a *soil series*. All the soils of a series have major horizons that are similar in composition, thickness, and arrangement. The soils of a given series can differ in texture of the surface layer, slope, stoniness, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil

phase commonly indicates a feature that affects use or management. For example, Gilpin-Bouldin-Petros complex, 25 to 80 percent slopes, very stony.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes. A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Colbert-Lyerly-Rock outcrop complex, 5 to 20 percent slopes, is an example.

This survey includes *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Ash disposal area is an example of a miscellaneous area.

Table 4 gives the acreage and proportionate extent of each map unit. Other tables give properties of the soils and the limitations, capabilities, and potentials for many uses. The Glossary defines many of the terms used in describing the soils or miscellaneous areas.

AeC—Allen loam, 5 to 12 percent slopes

Map Unit Composition

Major components
Allen and similar soils: 90 to 97 percent

Contrasting inclusions
Townley soils: 3 to 10 percent

Component Descriptions

Allen
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Mountain slope on mountains
Slope shape (down, across): Convex, concave
Parent material: Fine-loamy colluvium derived from sandstone and shale
Slope range: 5 to 12 percent
Surface fragments: None
Depth to restrictive feature: Greater than 80 inches
Drainage class: Well drained
Slowest permeability: Moderate (about 0.57 in/hr)
Available water capacity to 60 inches: Moderate (about 8.1 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: Medium
Land capability class (non-irrigated): 3e
Hydric soil: No

Typical profile:
H1—0 to 3 inches; loam
H2—3 to 28 inches; clay loam
H3—28 to 70 inches; gravelly clay loam

Use and Management Considerations

Cropland
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and help to minimize soil loss by erosion.

Pasture and hayland

- Avoiding overgrazing can reduce the hazard of erosion.
- Maintaining healthy plants and a vegetative cover can reduce the hazard of erosion.
- Erosion control is needed when pastures are renovated.

Woodland

- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

AeD—Allen loam, 12 to 20 percent slopes

Map Unit Composition

Major components
Allen and similar soils: 90 to 100 percent

Contrasting inclusions
Townley soils: 0 to 5 percent
Bouldin soils: 0 to 5 percent

Component Descriptions

Allen
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Mountain slope on mountains
Slope shape (down, across): Concave, concave
Parent material: Fine-loamy colluvium derived from sandstone and shale
Slope range: 12 to 20 percent
Surface fragments: None
Depth to restrictive feature: Greater than 80 inches
Drainage class: Well drained
Slowest permeability: Moderate (about 0.57 in/hr)
Available water capacity to 60 inches: Moderate (about 8.1 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: High
Land capability class (non-irrigated): 4e
Hydric soil: No

Typical profile:
H1—0 to 3 inches; loam
H2—3 to 28 inches; clay loam
H3—28 to 70 inches; gravelly clay loam

Use and Management Considerations

Cropland
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and help to minimize soil loss by erosion.

Pasture and hayland
- Avoiding overgrazing can reduce the hazard of erosion.
- Maintaining healthy plants and a vegetative cover can reduce the hazard of erosion.
- Erosion control is needed when pastures are renovated.

Woodland
- If the soil is disturbed, the slope increases the hazard of erosion.
- The slope increases excavation costs, poses safety hazards, and creates a potential for erosion during the construction of haul roads and log landings.
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- The slope restricts the use of equipment for preparing sites for planting and seeding.

AfD—Allen-Jefferson-Urban land complex, 5 to 20 percent slopes

Map Unit Composition

Major components
Allen and similar soils: 30 to 60 percent
Jefferson and similar soils: 25 to 40 percent
Urban land: 15 to 30 percent

Component Descriptions

Allen
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Mountain slope on mountains
Slope shape (down, across): Concave, concave
Parent material: Fine-loamy colluvium derived from sandstone and shale
Slope range: 12 to 20 percent
Surface fragments: None
Depth to restrictive feature: Greater than 80 inches
Drainage class: Well drained
Slowest permeability: Moderate (about 0.57 in/hr)
Available water capacity to 60 inches: Moderate (about 8.1 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet

Runoff class: High
Land capability class (non-irrigated): Unspecified
Hydric soil: No

Typical profile:
H1—0 to 3 inches; loam
H2—3 to 28 inches; clay loam
H3—28 to 70 inches; gravelly clay loam

Jefferson
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Mountain slope
Slope shape (down, across): Concave, concave
Parent material: Fine-loamy colluvium derived from interbedded sedimentary rock
Slope range: 5 to 20 percent
Surface fragments: None
Depth to restrictive feature: 40 to 60 inches to paralithic bedrock
Drainage class: Well drained
Slowest permeability: Moderate (about 0.60 in/hr)
Available water capacity to 60 inches: Moderate (about 8.9 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: High
Land capability class (non-irrigated): Unspecified
Hydric soil: No

Typical profile:
H1—0 to 11 inches; loam
H2—11 to 35 inches; clay loam
H3—35 to 48 inches; gravelly loam
H4—48 to 60 inches; gravelly fine sandy loam

Urban land
MLRA: 128 - Southern Appalachian Ridges and Valleys
Parent material: Areas where the surface is covered by roads, streets, parking lots, commercial buildings, houses, and other types of impervious ground cover (in places natural drainage has been altered by a system of ditches and storm drains)
Slope range: 5 to 20 percent

AmC—Armuchee silt loam, 5 to 12 percent slopes

Map Unit Composition

Major components
Armuchee and similar soils: 90 to 100 percent

Contrasting inclusions
Montevallo soils: 0 to 5 percent
Townley soils: 0 to 5 percent

Component Descriptions

Armuchee
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Ridge in valley

Landform position (two-dimensional): Summit
Slope shape (down, across): Convex, convex
Parent material: Clayey residuum weathered from acid shale
Slope range: 5 to 12 percent
Surface fragments: None
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Drainage class: Well drained
Slowest permeability: Very slow to impermeable (about 0.00 in/hr)
Available water capacity to 60 inches: Very low (about 2.5 inches)
Shrink-swell potential: Moderate (about 4.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: Medium
Land capability class (non-irrigated): 4e
Hydric soil: No

Typical profile:
H1—0 to 6 inches; silt loam
H2—6 to 11 inches; channery silty clay loam
H3—11 to 21 inches; very channery silty clay
H4—21 to 40 inches; weathered bedrock

Use and Management Considerations

Cropland
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and help to minimize soil loss by erosion.
- Incorporating crop residue or other organic matter into the surface layer increases the capacity of the soil to hold and retain moisture. Plants may suffer from moisture stress because of the limited available water capacity.
- Controlling traffic can minimize soil compaction.
- The rooting depth of crops may be restricted by the high clay content.
- Maintaining or increasing the content of organic matter in the soil helps to prevent crusting, improves tilth, and increases the rate of water infiltration.

Pasture and hayland
- Avoiding overgrazing can reduce the hazard of erosion.
- Maintaining healthy plants and a vegetative cover can reduce the hazard of erosion.
- Erosion control is needed when pastures are renovated.
- Plants may suffer from moisture stress during the drier summer months because of the limited available water capacity.
- Using a system of seedbed preparation that minimizes soil disturbance when pastures are renovated conserves soil moisture.
- This soil provides poor summer pasture.

Woodland
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.
- The slope may restrict the use of some mechanical planting equipment.

- Because of the content of rock fragments, the use of mechanical planting equipment is not practical.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- Stones restrict the use of equipment during site preparation for planting or seeding.

AmD—Armuchee silt loam, 12 to 20 percent slopes

Map Unit Composition

Major components
Armuchee and similar soils: 90 to 95 percent

Contrasting inclusions
Montevallo soils: 5 to 10 percent

Component Descriptions

Armuchee
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Ridge on upland
Landform position (two-dimensional): Backslope
Slope shape (down, across): Linear, convex
Parent material: Clayey residuum weathered from acid shale
Slope range: 12 to 20 percent
Surface fragments: None
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Drainage class: Well drained
Slowest permeability: Very slow to impermeable (about 0.00 in/hr)
Available water capacity to 60 inches: Very low (about 2.5 inches)
Shrink-swell potential: Moderate (about 4.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: High
Land capability class (non-irrigated): 6e
Hydric soil: No

Typical profile:
H1—0 to 6 inches; silt loam
H2—6 to 11 inches; channery silty clay loam
H3—11 to 21 inches; very channery silty clay
H4—21 to 40 inches; weathered bedrock

Use and Management Considerations

Cropland
- This soil is generally not suited to cropland.

Pasture and hayland
- Avoiding overgrazing can reduce the hazard of erosion.
- Maintaining healthy plants and a vegetative cover can reduce the hazard of erosion.
- Erosion control is needed when pastures are renovated.
- Plants may suffer from moisture stress during the drier summer months because of the limited available water capacity.
- Using a system of seedbed preparation that minimizes soil disturbance when pastures are renovated conserves soil moisture.
- This soil provides poor summer pasture.

Woodland

- If the soil is disturbed, the slope increases the hazard of erosion.
- The slope increases excavation costs, poses safety hazards, and creates a potential for erosion during the construction of haul roads and log landings.
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- Because of the content of rock fragments, the use of mechanical planting equipment is not practical.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- The slope restricts the use of equipment for preparing sites for planting and seeding.
- Stones restrict the use of equipment during site preparation for planting or seeding.

AmE—Armuchee silt loam, 20 to 35 percent slopes

Map Unit Composition

Major components
Armuchee and similar soils: 90 to 100 percent

Contrasting inclusions
Montevallo soils: 0 to 10 percent

Component Descriptions

Armuchee
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Ridge on upland
Landform position (two-dimensional): Backslope
Slope shape (down, across): Linear, convex
Parent material: Clayey residuum weathered from acid shale
Slope range: 20 to 35 percent
Surface fragments: None
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Drainage class: Well drained
Slowest permeability: Very slow to impermeable (about 0.00 in/hr)
Available water capacity to 60 inches: Very low (about 2.5 inches)
Shrink-swell potential: Moderate (about 4.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: High
Land capability class (non-irrigated): 7e
Hydric soil: No

Typical profile:
H1—0 to 6 inches; silt loam
H2—6 to 11 inches; channery silty clay loam

H3—11 to 21 inches; very channery silty clay
H4—21 to 40 inches; weathered bedrock

Use and Management Considerations

Cropland
- This soil is generally not suited to cropland.
- The slope and the erosion hazard generally make cultivation impractical.

Pasture and hayland
- This soil is generally not recommended for pasture.

Woodland
- If the soil is disturbed, the slope increases the hazard of erosion.
- The slope increases excavation costs, poses safety hazards, and creates a potential for erosion during the construction of haul roads and log landings.
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and of harvesting and mechanical planting equipment.
- Because of the slope, the use of mechanical planting equipment is not practical.
- Because of the content of rock fragments, the use of mechanical planting equipment is not practical.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- The slope restricts the use of equipment for preparing sites for planting and seeding.
- Stones restrict the use of equipment during site preparation for planting or seeding.

ANS—Area not surveyed, access denied

Map Unit Composition

Major components
Area not surveyed and similar soils: 100 percent

Component Descriptions

Area not surveyed
MLRA: 128 - Southern Appalachian Ridges and Valleys
Surface fragments: None
Depth to restrictive feature: Greater than 80 inches
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Hydric soil: Unranked

ApC—Apison-Sunlight complex, 5 to 12 percent slopes

Map Unit Composition

Major components
Apison and similar soils: 53 to 93 percent
Sunlight and similar soils: 7 to 47 percent

Component Descriptions

Apison
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Ridge on upland
Landform position (two-dimensional): Summit
Slope shape (down, across): Linear, convex
Parent material: Fine-loamy residuum weathered from interbedded sedimentary rock
Slope range: 5 to 12 percent
Surface fragments: None
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Drainage class: Well drained
Slowest permeability: Very slow to impermeable (about 0.00 in/hr)
Available water capacity to 60 inches: Low (about 3.6 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: Medium
Land capability class (non-irrigated): 6e
Hydric soil: No

Typical profile:
H1—0 to 3 inches; loam
H2—3 to 22 inches; clay loam
H3—22 to 60 inches; weathered bedrock

Sunlight
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Convex ridge on upland
Slope shape (down, across): Convex, convex
Parent material: Loamy-skeletal residuum weathered from shale and siltstone
Slope range: 5 to 12 percent
Surface fragments: None
Depth to restrictive feature: 10 to 20 inches to paralithic bedrock
Drainage class: Well drained
Slowest permeability: Slow (about 0.06 in/hr)
Available water capacity to 60 inches: Very low (about 1.7 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: Medium
Land capability class (non-irrigated): 6e
Hydric soil: No

Typical profile:
H1—0 to 3 inches; channery sandy loam
H2—3 to 13 inches; very channery loam
H3—13 to 20 inches; weathered bedrock

Use and Management Considerations

Cropland
- These soils are generally not suited to cropland.

Pasture and hayland
- Avoiding overgrazing can reduce the hazard of erosion.
- Maintaining healthy plants and a vegetative cover can reduce the hazard of erosion.
- Erosion control is needed when pastures are renovated.
- Plants may suffer from moisture stress during the drier summer months because of the limited available water capacity.
- Using a system of seedbed preparation that minimizes soil disturbance when pastures are renovated conserves soil moisture.
- These soils provide poor summer pasture.

Woodland
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- Rock fragments obstruct the use of mechanical planting equipment.
- Because of the content of rock fragments, the use of mechanical planting equipment is not practical.
- Stones restrict the use of equipment during site preparation for planting or seeding.

ApF—Apison-Sunlight complex, 25 to 60 percent slopes, very rocky

Map Unit Composition

Major components
Apison and similar soils: 40 to 62 percent
Sunlight and similar soils: 35 to 50 percent

Contrasting inclusions
Rock outcrop: 3 to 10 percent

Component Descriptions

Apison
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Ridge on upland
Landform position (two-dimensional): Backslope
Slope shape (down, across): Linear, convex
Parent material: Fine-loamy residuum weathered from interbedded sedimentary rock
Slope range: 25 to 60 percent
Surface fragments: None
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Drainage class: Well drained
Slowest permeability: Very slow to impermeable (about 0.00 in/hr)
Available water capacity to 60 inches: Low (about 3.6 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None

Depth to seasonal water saturation: Greater than 6 feet
Runoff class: High
Land capability class (non-irrigated): 7e
Hydric soil: No

Typical profile:
H1—0 to 3 inches; loam
H2—3 to 22 inches; clay loam
H3—22 to 60 inches; weathered bedrock

Sunlight
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Convex ridge on upland
Slope shape (down, across): Convex, convex
Parent material: Channery residuum weathered from shale and siltstone
Slope range: 25 to 60 percent
Surface fragments: None
Depth to restrictive feature: 10 to 20 inches to paralithic bedrock
Drainage class: Well drained
Slowest permeability: Slow (about 0.06 in/hr)
Available water capacity to 60 inches: Very low (about 1.7 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: High
Land capability class (non-irrigated): 7e
Hydric soil: No

Typical profile:
H1—0 to 3 inches; channery sandy loam
H2—3 to 13 inches; very channery loam
H3—13 to 20 inches; weathered bedrock

Use and Management Considerations

Cropland
- These soils are generally not suited to cropland.
- The slope and the erosion hazard generally make cultivation impractical.

Pasture and hayland
- These soils are generally not recommended for pasture.
- Steep slopes generally make establishing pastures impractical.

Woodland
- If the soil is disturbed, the slope increases the hazard of erosion.
- The slope increases excavation costs, poses safety hazards, and creates a potential for erosion during the construction of haul roads and log landings.
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and of harvesting and mechanical planting equipment.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.

- Because of the slope, the use of equipment to prepare sites for planting and seeding is not practical.
- Because of the slope, the use of mechanical planting equipment is not practical.
- Rock fragments obstruct the use of mechanical planting equipment.
- Because of the content of rock fragments, the use of mechanical planting equipment is not practical.
- Stones restrict the use of equipment during site preparation for planting or seeding.

ASD—Ash disposal area

Map Unit Composition

Major components
Ash disposal area: 100 percent

Component Descriptions

Ash disposal area
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Ash disposal area fill
Parent material: A wide range of textures derived from mainly coal, fly ash, and earthy fill material
Slope range: 2 to 12 percent

Use and Management Considerations

- Grassed waterways can be used in some areas to slow and direct the movement of water and minimize erosion.
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and help to minimize soil loss by erosion.
- The slope may restrict the use of some mechanical planting equipment.

BeF—Bethesda-Mines pit complex, 10 to 80 percent slopes

Map Unit Composition

Major components
Bethesda and similar soils: 50 to 90 percent
Mines pit: 10 to 50 percent

Component Descriptions

Bethesda
MLRA: 125 - Cumberland Plateau and Mountains
Landform: Open pit mine on mountains
Landform position (two-dimensional): Backslope
Slope shape (down, across): Concave, linear
Parent material: Coal extraction mine spoil derived from interbedded sedimentary rock
Slope range: 10 to 80 percent
Surface fragments: None
Depth to restrictive feature: Greater than 80 inches
Drainage class: Well drained
Slowest permeability: Moderately slow (about 0.20 in/hr)
Available water capacity to 60 inches: Low (about 5.6 inches)

Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: Very high
Land capability class (non-irrigated): 7e
Hydric soil: No

Typical profile:
H1—0 to 23 inches; channery loam
H2—23 to 46 inches; very channery clay loam
H3—46 to 60 inches; cobbly loam

Mines pit
MLRA: 125 - Cumberland Plateau and Mountains
Landform: Surface mine
Slope range: 10 to 80 percent
Land capability class (non-irrigated): 7e

Use and Management Considerations

Cropland
- This Bethesda soil is generally not suited to cropland.

Pasture and hayland
- This soil is generally not recommended for pasture.
- Steep slopes generally make establishing pastures impractical.

Woodland
- If the soil is disturbed, the slope increases the hazard of erosion.
- The slope increases excavation costs, poses safety hazards, and creates a potential for erosion during the construction of haul roads and log landings.
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and of harvesting and mechanical planting equipment.
- Because of the slope, the use of equipment to prepare sites for planting and seeding is not practical.
- Because of the slope, the use of mechanical planting equipment is not practical.
- Rock fragments obstruct the use of mechanical planting equipment.

Bg—Bloomingdale silty clay loam, occasionally flooded

Map Unit Composition

Major components
Bloomingdale and similar soils: 90 to 100 percent

Contrasting inclusions
Capshaw soils: 0 to 10 percent

Component Descriptions

Bloomingdale
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Flood plain in valley

Slope shape (down, across): Concave, concave
Parent material: Clayey alluvium derived from limestone and shale
Slope range: 0 to 2 percent
Surface fragments: None
Depth to restrictive feature: Greater than 80 inches
Drainage class: Poorly drained
Slowest permeability: Moderate (about 0.60 in/hr)
Available water capacity to 60 inches: High (about 12.0 inches)
Shrink-swell potential: Moderate (about 4.5 LEP)
Flooding hazard: Occasional
Ponding hazard: None
Seasonal water saturation (depth, kind): About 0 to 12 inches, apparent water table
Runoff class: Negligible
Land capability class (non-irrigated): 4w
Hydric soil: Yes

Typical profile:
H1—0 to 9 inches; silty clay loam
H2—9 to 80 inches; silty clay

Use and Management Considerations

Cropland
- Careful selection and application of chemicals and fertilizers help to minimize the possibility of ground-water contamination.
- Controlling traffic can minimize soil compaction.
- The rooting depth of crops may be restricted by the high clay content.
- Maintaining or increasing the content of organic matter in the soil helps to prevent crusting, improves tilth, and increases the rate of water infiltration.
- Measures that protect the soil from scouring and minimize the loss of crop residue by floodwaters are needed.
- Small grain crops may be damaged by flooding in winter and spring.
- Subsurface drainage helps to lower the seasonal high water table.
- Including deep-rooted cover crops in the rotation is important for improving soil structure and providing pathways in the clayey subsoil that can facilitate the movement of water into subsurface drains.

Pasture and hayland
- Forage production can be improved by seeding grass-legume mixtures that are tolerant of flooding.
- Sediment left on forage plants after a flood event may reduce palatability and forage intake by the grazing animal.
- Excess water should be removed, or grass or legume species that are adapted to wet soil conditions should be planted.
- Restricting grazing during wet periods can minimize compaction.

Woodland
- A seasonal high water table can inhibit the growth of some species of seedlings by reducing root respiration.
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- Flooding may result in damage to haul roads and increased maintenance costs.
- Soil wetness may limit the use of log trucks.
- Flooding restricts the safe use of roads by log trucks.

- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- Because of the stickiness of the soil, the use of equipment for site preparation is restricted to the drier periods.

BrE—Bradyville-Rock outcrop complex, 5 to 25 percent slopes

Map Unit Composition

Major components
Bradyville and similar soils: 41 to 81 percent
Rock outcrop: 19 to 59 percent

Component Descriptions

Bradyville
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Ridge on upland
Slope shape (down, across): Convex, convex
Parent material: Clayey residuum weathered from limestone and dolomite
Slope range: 5 to 25 percent
Surface fragments: None
Depth to restrictive feature: 40 to 60 inches to lithic bedrock
Drainage class: Well drained
Slowest permeability: Very slow to impermeable (about 0.00 in/hr)
Available water capacity to 60 inches: Low (about 5.6 inches)
Shrink-swell potential: Moderate (about 4.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: Medium
Land capability class (non-irrigated): 6s
Hydric soil: No

Typical profile:
H1—0 to 6 inches; gravelly silt loam
H2—6 to 44 inches; clay
H3—44 to 48 inches; unweathered bedrock

Rock outcrop
MLRA: 128 - Southern Appalachian Ridges and Valleys
Slope range: 5 to 25 percent
Runoff class: Very high

Use and Management Considerations

Cropland
- This Bradyville soil is generally not suited to cropland.

Pasture and hayland
- Avoiding overgrazing can reduce the hazard of erosion.
- Maintaining healthy plants and a vegetative cover can reduce the hazard of erosion.
- Erosion control is needed when pastures are renovated.

- Plants may suffer from moisture stress during the drier summer months because of the limited available water capacity.
- Using a system of seedbed preparation that minimizes soil disturbance when pastures are renovated conserves soil moisture.
- This soil provides poor summer pasture.

Woodland
- If the soil is disturbed, the slope increases the hazard of erosion.
- The slope increases excavation costs, poses safety hazards, and creates a potential for erosion during the construction of haul roads and log landings.
- The limited available water capacity inhibits root development and increases the seedling mortality rate.
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- Because of the content of clay, this soil becomes sticky when wet. The stickiness increases the cost of constructing haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- Rock fragments obstruct the use of mechanical planting equipment.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- The slope restricts the use of equipment for preparing sites for planting and seeding.
- Because of the stickiness of the soil, the use of equipment for site preparation is restricted to the drier periods.

CaB—Capshaw silt loam, 2 to 5 percent slopes

Map Unit Composition

Major components
Capshaw and similar soils: 78 to 95 percent

Contrasting inclusions
Bloomingdale soils: 5 to 8 percent
Armuchee soils: 0 to 5 percent
Colbert soils: 0 to 3 percent
Shady soils: 0 to 3 percent
Townley soils: 0 to 3 percent

Component Descriptions

Capshaw
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Stream terrace in valley
Slope shape (down, across): Linear, linear
Parent material: Clayey alluvium over clayey residuum weathered from limestone and shale
Slope range: 2 to 5 percent
Surface fragments: None
Depth to restrictive feature: 71 to 76 inches to paralithic bedrock
Drainage class: Moderately well drained

Slowest permeability: Impermeable (about 0.00 in/hr)
Available water capacity to 60 inches: High (about 11.0 inches)
Shrink-swell potential: Moderate (about 4.5 LEP)
Flooding hazard: None
Ponding hazard: None
Seasonal water saturation (depth, kind): About 24 to 42 inches, apparent water table
Runoff class: Low
Land capability class (non-irrigated): 2w
Hydric soil: No

Typical profile:
H1—0 to 4 inches; silt loam
H2—4 to 24 inches; silty clay loam
H3—24 to 36 inches; clay
H4—36 to 72 inches; silty clay
H5—72 to 76 inches; weathered bedrock

Use and Management Considerations

Cropland
- All areas of this map unit are prime farmland.
- Grassed waterways can be used in some areas to slow and direct the movement of water and minimize erosion.
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and help to minimize soil loss by erosion.
- Careful selection and application of chemicals and fertilizers help to minimize the possibility of ground-water contamination.
- Controlling traffic can minimize soil compaction.
- The rooting depth of crops may be restricted by the high clay content.
- Maintaining or increasing the content of organic matter in the soil helps to prevent crusting, improves tilth, and increases the rate of water infiltration.

Pasture and hayland
- Erosion control is needed when pastures are renovated.

Woodland
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.
- Rock fragments obstruct the use of mechanical planting equipment.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

CbD—Colbert-Lyerly-Rock outcrop complex, 5 to 20 percent slopes

Map Unit Composition

Major components
Colbert and similar soils: 25 to 50 percent
Lyerly and similar soils: 30 to 36 percent
Rock outcrop: 20 to 25 percent

Contrasting inclusions
Gladeville soils: 0 to 4 percent
Bloomingdale soils: 0 to 3 percent
Capshaw soils: 0 to 3 percent
Etowah soils: 0 to 2 percent
Shady soils: 0 to 2 percent

Component Descriptions

Colbert
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Hillslope on upland
Landform position (two-dimensional): Backslope
Slope shape (down, across): Convex, linear
Parent material: Clayey residuum weathered from argillaceous limestone
Slope range: 5 to 20 percent
Surface fragments: None
Depth to restrictive feature: 40 to 72 inches to lithic bedrock
Drainage class: Moderately well drained
Slowest permeability: Very slow to impermeable (about 0.00 in/hr)
Available water capacity to 60 inches: Moderate (about 8.6 inches)
Shrink-swell potential: High (about 7.5 LEP)
Flooding hazard: None
Ponding hazard: None
Seasonal water saturation (depth, kind): About 42 to 60 inches, apparent water table
Runoff class: Very high
Land capability class (non-irrigated): 7s
Hydric soil: No

Typical profile:
H1—0 to 9 inches; silt loam
H2—9 to 58 inches; clay
H3—58 to 60 inches; unweathered bedrock

Lyerly
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Hillslope on upland
Landform position (two-dimensional): Backslope
Slope shape (down, across): Linear, concave
Parent material: Clayey residuum weathered from argillaceous limestone
Slope range: 5 to 20 percent
Surface fragments: None
Depth to restrictive feature: 34 to 40 inches to lithic bedrock
Drainage class: Well drained
Slowest permeability: Impermeable (about 0.00 in/hr)
Available water capacity to 60 inches: Low (about 5.5 inches)
Shrink-swell potential: High (about 7.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: Very high
Land capability class (non-irrigated): 7s
Hydric soil: No

Typical profile:
H1—0 to 5 inches; silt loam

H2—5 to 10 inches; silty clay loam
H3—10 to 38 inches; clay
H4—38 to 40 inches; unweathered bedrock

Rock outcrop
MLRA: 128 - Southern Appalachian Ridges and Valleys
Parent material: Limestone
Slope range: 5 to 20 percent
Runoff class: Very high

Use and Management Considerations

Cropland
- These Colbert and Lyerly soils are generally not suited to cropland.

Pasture and hayland
- These soils are generally not recommended for pasture.

Woodland
- If the soil is disturbed, the slope increases the hazard of erosion.
- The slope increases excavation costs, poses safety hazards, and creates a potential for erosion during the construction of haul roads and log landings.
- The limited available water capacity inhibits root development and increases the seedling mortality rate.
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- Because of the content of clay, these soils become sticky when wet. The stickiness increases the cost of constructing haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- The slope restricts the use of equipment for preparing sites for planting and seeding.
- Because of the stickiness of the soil, the use of equipment for site preparation is restricted to the drier periods.

CoC—Collegedale silt loam, 5 to 12 percent slopes

Map Unit Composition

Major components
Collegedale and similar soils: 90 to 98 percent

Contrasting inclusions
Colbert soils: 2 to 10 percent

Component Descriptions

Collegedale
MLRA: 128 - Southern Appalachian Ridges and Valleys

Landform: Convex ridge on upland
Landform position (two-dimensional): Summit
Slope shape (down, across): Convex, convex
Parent material: Clayey residuum weathered from limestone and shale
Slope range: 5 to 12 percent
Surface fragments: None
Depth to restrictive feature: Greater than 80 inches
Drainage class: Well drained
Slowest permeability: Moderately slow (about 0.20 in/hr)
Available water capacity to 60 inches: Moderate (about 8.7 inches)
Shrink-swell potential: Moderate (about 4.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: High
Land capability class (non-irrigated): 4e
Hydric soil: No

Typical profile:
H1—0 to 5 inches; silt loam
H2—5 to 80 inches; silty clay

Use and Management Considerations

Cropland
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and help to minimize soil loss by erosion.
- Controlling traffic can minimize soil compaction.
- The rooting depth of crops may be restricted by the high clay content.
- Maintaining or increasing the content of organic matter in the soil helps to prevent crusting, improves tilth, and increases the rate of water infiltration.

Pasture and hayland
- Avoiding overgrazing can reduce the hazard of erosion.
- Maintaining healthy plants and a vegetative cover can reduce the hazard of erosion.
- Erosion control is needed when pastures are renovated.

Woodland
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- Because of the content of clay, this soil becomes sticky when wet. The stickiness increases the cost of constructing haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- Because of the stickiness of the soil, the use of equipment for site preparation is restricted to the drier periods.

CoD—Collegedale silt loam, 12 to 20 percent slopes

Map Unit Composition

Major components
Collegedale and similar soils: 80 to 95 percent

Contrasting inclusions
Colbert soils: 5 to 12 percent
Etowah soils: 0 to 10 percent

Component Descriptions

Collegedale
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Ridge on upland
Landform position (two-dimensional): Backslope
Slope shape (down, across): Convex, convex
Parent material: Clayey residuum weathered from limestone and shale
Slope range: 12 to 20 percent
Surface fragments: None
Depth to restrictive feature: Greater than 80 inches
Drainage class: Well drained
Slowest permeability: Moderately slow (about 0.20 in/hr)
Available water capacity to 60 inches: Moderate (about 8.7 inches)
Shrink-swell potential: Moderate (about 4.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: High
Land capability class (non-irrigated): 6e
Hydric soil: No

Typical profile:
H1—0 to 5 inches; silt loam
H2—5 to 80 inches; silty clay

Use and Management Considerations

Cropland
- This soil is generally not suited to cropland.

Pasture and hayland
- Avoiding overgrazing can reduce the hazard of erosion.
- Maintaining healthy plants and a vegetative cover can reduce the hazard of erosion.
- Erosion control is needed when pastures are renovated.

Woodland
- If the soil is disturbed, the slope increases the hazard of erosion.
- The slope increases excavation costs, poses safety hazards, and creates a potential for erosion during the construction of haul roads and log landings.
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- Because of the content of clay, this soil becomes sticky when wet. The stickiness increases the cost of constructing haul roads and log landings.

- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- The slope restricts the use of equipment for preparing sites for planting and seeding.
- Because of the stickiness of the soil, the use of equipment for site preparation is restricted to the drier periods.

DeB—Dewey silt loam, 2 to 5 percent slopes

Map Unit Composition

Major components
Dewey and similar soils: 85 to 96 percent

Contrasting inclusions
Etowah soils: 3 to 10 percent
Minvale soils: 2 to 5 percent

Component Descriptions

Dewey
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Ridge on upland
Landform position (two-dimensional): Summit
Slope shape (down, across): Convex, convex
Parent material: Clayey residuum weathered from limestone or alluvium over residuum weathered from limestone
Slope range: 2 to 5 percent
Surface fragments: None
Depth to restrictive feature: Greater than 80 inches
Drainage class: Well drained
Slowest permeability: Moderate (about 0.57 in/hr)
Available water capacity to 60 inches: High (about 9.5 inches)
Shrink-swell potential: Moderate (about 4.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: Low
Land capability class (non-irrigated): 2e
Hydric soil: No

Typical profile:
H1—0 to 7 inches; silt loam
H2—7 to 27 inches; silty clay loam
H3—27 to 80 inches; silty clay

Use and Management Considerations

Cropland
- All areas of this map unit are prime farmland.
- Grassed waterways can be used in some areas to slow and direct the movement of water and minimize erosion.

- Using a system of conservation tillage and planting cover crops reduce the runoff rate and help to minimize soil loss by erosion.
- Controlling traffic can minimize soil compaction.
- The rooting depth of crops may be restricted by the high clay content.
- Maintaining or increasing the content of organic matter in the soil helps to prevent crusting, improves tilth, and increases the rate of water infiltration.

Pasture and hayland
- Erosion control is needed when pastures are renovated.

Woodland
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

DeC—Dewey silt loam, 5 to 12 percent slopes

Map Unit Composition

Major components
Dewey and similar soils: 85 to 95 percent

Contrasting inclusions
Minvale soils: 3 to 10 percent
Etowah soils: 2 to 5 percent

Component Descriptions

Dewey
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Ridge on upland
Landform position (two-dimensional): Backslope
Slope shape (down, across): Linear, convex
Parent material: Clayey residuum weathered from limestone or alluvium over residuum weathered from limestone
Slope range: 5 to 12 percent
Surface fragments: None
Depth to restrictive feature: Greater than 80 inches
Drainage class: Well drained
Slowest permeability: Moderate (about 0.57 in/hr)
Available water capacity to 60 inches: High (about 9.5 inches)
Shrink-swell potential: Moderate (about 4.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: Medium
Land capability class (non-irrigated): 3e
Hydric soil: No

Typical profile:
H1—0 to 7 inches; silt loam

H2—7 to 27 inches; silty clay loam
H3—27 to 80 inches; silty clay

Use and Management Considerations

Cropland
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and help to minimize soil loss by erosion.
- Controlling traffic can minimize soil compaction.
- The rooting depth of crops may be restricted by the high clay content.
- Maintaining or increasing the content of organic matter in the soil helps to prevent crusting, improves tilth, and increases the rate of water infiltration.

Pasture and hayland
- Avoiding overgrazing can reduce the hazard of erosion.
- Maintaining healthy plants and a vegetative cover can reduce the hazard of erosion.
- Erosion control is needed when pastures are renovated.

Woodland
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

DeD—Dewey silt loam, 12 to 20 percent slopes

Map Unit Composition

Major components
Dewey and similar soils: 90 to 95 percent

Contrasting inclusions
Minvale soils: 5 to 10 percent

Component Descriptions

Dewey
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Ridge on upland
Landform position (two-dimensional): Backslope
Slope shape (down, across): Linear, convex
Parent material: Clayey residuum weathered from limestone or alluvium over residuum weathered from limestone
Slope range: 12 to 20 percent
Surface fragments: None
Depth to restrictive feature: Greater than 80 inches
Drainage class: Well drained
Slowest permeability: Moderate (about 0.57 in/hr)
Available water capacity to 60 inches: High (about 9.5 inches)
Shrink-swell potential: Moderate (about 4.5 LEP)

Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: Medium
Land capability class (non-irrigated): 4e
Hydric soil: No

Typical profile:
H1—0 to 7 inches; silt loam
H2—7 to 27 inches; silty clay loam
H3—27 to 80 inches; silty clay

Use and Management Considerations

Cropland
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and help to minimize soil loss by erosion.
- Controlling traffic can minimize soil compaction.
- The rooting depth of crops may be restricted by the high clay content.
- Maintaining or increasing the content of organic matter in the soil helps to prevent crusting, improves tilth, and increases the rate of water infiltration.

Pasture and hayland
- Avoiding overgrazing can reduce the hazard of erosion.
- Maintaining healthy plants and a vegetative cover can reduce the hazard of erosion.
- Erosion control is needed when pastures are renovated.

Woodland
- If the soil is disturbed, the slope increases the hazard of erosion.
- The slope increases excavation costs, poses safety hazards, and creates a potential for erosion during the construction of haul roads and log landings.
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- The slope restricts the use of equipment for preparing sites for planting and seeding.

DeE—Dewey silt loam, 20 to 45 percent slopes

Map Unit Composition

Major components
Dewey and similar soils: 88 to 95 percent

Contrasting inclusions
Minvale soils: 5 to 12 percent

Component Descriptions

Dewey
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Ridge on upland
Landform position (two-dimensional): Backslope
Slope shape (down, across): Convex, convex
Parent material: Clayey residuum weathered from limestone or alluvium over residuum weathered from limestone
Slope range: 20 to 45 percent
Surface fragments: None
Depth to restrictive feature: Greater than 80 inches
Drainage class: Well drained
Slowest permeability: Moderate (about 0.57 in/hr)
Available water capacity to 60 inches: High (about 9.5 inches)
Shrink-swell potential: Moderate (about 4.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: High
Land capability class (non-irrigated): 6e
Hydric soil: No

Typical profile:
H1—0 to 7 inches; silt loam
H2—7 to 27 inches; silty clay loam
H3—27 to 80 inches; silty clay

Use and Management Considerations

Cropland
- This soil is generally not suited to cropland.
- The slope and the erosion hazard generally make cultivation impractical.

Pasture and hayland
- Avoiding overgrazing can reduce the hazard of erosion.
- Maintaining healthy plants and a vegetative cover can reduce the hazard of erosion.
- The slope may restrict the use of some farm equipment.

Woodland
- If the soil is disturbed, the slope increases the hazard of erosion.
- The slope increases excavation costs, poses safety hazards, and creates a potential for erosion during the construction of haul roads and log landings.
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and of harvesting and mechanical planting equipment.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.
- Because of the slope, the use of mechanical planting equipment is not practical.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- The slope restricts the use of equipment for preparing sites for planting and seeding.

EcB—Ealy-Craigsville complex, rarely flooded

Map Unit Composition

Major components
Ealy and similar soils: 55 to 75 percent
Craigsville and similar soils: 25 to 45 percent

Component Descriptions

Ealy
MLRA: 125 - Cumberland Plateau and Mountains
Landform: Flood plain in valley
Slope shape (down, across): Linear, linear
Parent material: Coarse-loamy alluvium derived from sandstone
Slope range: 0 to 3 percent
Surface fragments: None
Depth to restrictive feature: Greater than 80 inches
Drainage class: Well drained
Slowest permeability: Moderately rapid (about 2.00 in/hr)
Available water capacity to 60 inches: High (about 9.1 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: Rare
Ponding hazard: None
Seasonal water saturation (depth, kind): About 60 to 72 inches, apparent water table
Runoff class: Very low
Land capability class (non-irrigated): 2w
Hydric soil: No

Typical profile:
H1—0 to 10 inches; fine sandy loam
H2—10 to 80 inches; fine sandy loam

Craigsville
MLRA: 125 - Cumberland Plateau and Mountains
Landform: Flood plain in valley
Slope shape (down, across): Linear, linear
Parent material: Loamy-skeletal alluvium derived from sandstone
Slope range: 0 to 5 percent
Surface fragments: None
Depth to restrictive feature: Greater than 80 inches
Drainage class: Well drained
Slowest permeability: Moderately rapid (about 2.00 in/hr)
Available water capacity to 60 inches: Low (about 5.0 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: Rare
Ponding hazard: None
Seasonal water saturation (depth, kind): About 60 to 72 inches, apparent water table
Runoff class: Very low
Land capability class (non-irrigated): 2w
Hydric soil: No

Typical profile:
H1—0 to 3 inches; cobbly fine sandy loam
H2—3 to 21 inches; very cobbly sandy loam
H3—21 to 80 inches; extremely cobbly loamy sand

Use and Management Considerations

Cropland
- Grassed waterways can be used in some areas to slow and direct the movement of water and minimize erosion.
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and help to minimize soil loss by erosion.
- Measures that protect the soil from scouring and minimize the loss of crop residue by floodwaters are needed.
- Small grain crops may be damaged by flooding in winter and spring.

Pasture and hayland
- Erosion control is needed when pastures are renovated.
- Forage production can be improved by seeding grass-legume mixtures that are tolerant of flooding.
- Sediment left on forage plants after a flood event may reduce palatability and forage intake by the grazing animal.

Woodland
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- Rock fragments obstruct the use of mechanical planting equipment.
- Because of the content of rock fragments, the use of mechanical planting equipment is not practical.
- Stones restrict the use of equipment during site preparation for planting or seeding.
- A loss of soil productivity may occur following an episode of uncontrolled fire.

EtB—Etowah loam, 2 to 5 percent slopes

Map Unit Composition

Major components
Etowah and similar soils: 90 to 95 percent

Contrasting inclusions
Waynesboro soils: 3 to 6 percent
Shady soils: 2 to 4 percent

Component Descriptions

Etowah
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Old high stream terrace on upland
Landform position (two-dimensional): Summit
Slope shape (down, across): Concave, convex
Parent material: Fine-loamy alluvium or colluvium that is commonly underlain by limestone residuum
Slope range: 2 to 5 percent
Surface fragments: None
Depth to restrictive feature: Greater than 80 inches
Drainage class: Well drained
Slowest permeability: Moderate (about 0.60 in/hr)
Available water capacity to 60 inches: High (about 10.8 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None

Depth to seasonal water saturation: Greater than 6 feet
Runoff class: Low
Land capability class (non-irrigated): 2e
Hydric soil: No

Typical profile:
H1—0 to 12 inches; loam
H2—12 to 27 inches; loam
H3—27 to 80 inches; clay loam

Use and Management Considerations

Cropland
- All areas of this map unit are prime farmland.
- Grassed waterways can be used in some areas to slow and direct the movement of water and minimize erosion.
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and help to minimize soil loss by erosion.

Pasture and hayland
- Erosion control is needed when pastures are renovated.

Woodland
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.

EtC—Etowah silt loam, 5 to 12 percent slopes

Map Unit Composition

Major components
Etowah and similar soils: 90 to 95 percent

Contrasting inclusions
Waynesboro soils: 5 to 10 percent
Shady soils: 2 to 5 percent

Component Descriptions

Etowah
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Old high stream terrace on upland
Landform position (two-dimensional): Backslope
Slope shape (down, across): Convex, concave
Parent material: Fine-loamy alluvium or colluvium that is commonly underlain by limestone residuum
Slope range: 5 to 12 percent
Surface fragments: None
Depth to restrictive feature: Greater than 80 inches
Drainage class: Well drained
Slowest permeability: Moderate (about 0.60 in/hr)
Available water capacity to 60 inches: High (about 10.8 inches)

Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: Medium
Land capability class (non-irrigated): 3e
Hydric soil: No

Typical profile:
H1—0 to 12 inches; silt loam
H2—12 to 27 inches; loam
H3—27 to 80 inches; clay loam

Use and Management Considerations

Cropland
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and help to minimize soil loss by erosion.
- Controlling traffic can minimize soil compaction.
- Maintaining or increasing the content of organic matter in the soil helps to prevent crusting, improves tilth, and increases the rate of water infiltration.

Pasture and hayland
- Avoiding overgrazing can reduce the hazard of erosion.
- Maintaining healthy plants and a vegetative cover can reduce the hazard of erosion.
- Erosion control is needed when pastures are renovated.

Woodland
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.
- The slope may restrict the use of some mechanical planting equipment.

FuB—Fullerton-Pailo complex, 2 to 5 percent slopes

Map Unit Composition

Major components
Fullerton and similar soils: 60 to 80 percent
Pailo and similar soils: 15 to 30 percent

Contrasting inclusions
Minvale soils: 5 to 10 percent

Component Descriptions

Fullerton
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Ridge on upland
Landform position (two-dimensional): Summit
Slope shape (down, across): Convex, linear

Parent material: Clayey residuum or creep deposits over clayey residuum weathered from cherty limestone
Slope range: 2 to 5 percent
Surface fragments: None
Depth to restrictive feature: Greater than 80 inches
Drainage class: Well drained
Slowest permeability: Moderate (about 0.60 in/hr)
Available water capacity to 60 inches: Moderate (about 7.3 inches)
Shrink-swell potential: Moderate (about 4.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: Low
Land capability class (non-irrigated): 2e
Hydric soil: No

Typical profile:
H1—0 to 7 inches; gravelly silt loam
H2—7 to 70 inches; gravelly clay

Pailo
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Ridge on upland
Landform position (two-dimensional): Summit
Slope shape (down, across): Convex, linear
Parent material: Loamy-skeletal residuum weathered from cherty limestone or creep deposits derived from cherty limestone over skeletal loamy residuum weathered from cherty limestone
Slope range: 2 to 5 percent
Surface fragments: None
Depth to restrictive feature: Greater than 80 inches
Drainage class: Somewhat excessively drained
Slowest permeability: Moderately rapid (about 2.00 in/hr)
Available water capacity to 60 inches: Low (about 5.1 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: Low
Land capability class (non-irrigated): 2e
Hydric soil: No

Typical profile:
H1—0 to 15 inches; gravelly silt loam
H2—15 to 40 inches; very gravelly silty clay loam
H3—40 to 80 inches; gravelly clay

Use and Management Considerations

Cropland
- All areas of this map unit are prime farmland.
- Grassed waterways can be used in some areas to slow and direct the movement of water and minimize erosion.
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and help to minimize soil loss by erosion.
- The rooting depth of crops may be restricted by the high clay content.

Pasture and hayland
- Erosion control is needed when pastures are renovated.

Woodland
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.
- Rock fragments obstruct the use of mechanical planting equipment.
- Because of the content of rock fragments, the use of mechanical planting equipment is not practical.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- Stones restrict the use of equipment during site preparation for planting or seeding.
- Because of the stickiness of the soil, the use of equipment for site preparation is restricted to the drier periods.

FuC—Fullerton-Pailo complex, 5 to 12 percent slopes

Map Unit Composition

Major components
Fullerton and similar soils: 60 to 75 percent
Pailo and similar soils: 15 to 35 percent

Contrasting inclusions
Minvale soils: 0 to 5 percent

Component Descriptions

Fullerton
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Ridge on upland
Landform position (two-dimensional): Backslope
Slope shape (down, across): Convex, convex
Parent material: Clayey residuum or creep deposits over clayey residuum weathered from cherty limestone
Slope range: 5 to 12 percent
Surface fragments: None
Depth to restrictive feature: Greater than 80 inches
Drainage class: Well drained
Slowest permeability: Moderate (about 0.60 in/hr)
Available water capacity to 60 inches: Moderate (about 7.3 inches)
Shrink-swell potential: Moderate (about 4.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: Medium
Land capability class (non-irrigated): 3e
Hydric soil: No

Typical profile:
H1—0 to 7 inches; gravelly silt loam
H2—7 to 70 inches; gravelly clay

Pailo
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Ridge on upland
Landform position (two-dimensional): Backslope
Slope shape (down, across): Convex, convex
Parent material: Loamy-skeletal residuum weathered from cherty limestone or creep deposits derived from cherty limestone over skeletal loamy residuum weathered from cherty limestone
Slope range: 5 to 12 percent
Surface fragments: None
Depth to restrictive feature: Greater than 80 inches
Drainage class: Somewhat excessively drained
Slowest permeability: Moderately rapid (about 2.00 in/hr)
Available water capacity to 60 inches: Low (about 5.1 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: Medium
Land capability class (non-irrigated): 3e
Hydric soil: No

Typical profile:
H1—0 to 15 inches; gravelly silt loam
H2—15 to 40 inches; very gravelly silty clay loam
H3—40 to 80 inches; gravelly clay

Use and Management Considerations

Cropland
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and help to minimize soil loss by erosion.
- The rooting depth of crops may be restricted by the high clay content.

Pasture and hayland
- Avoiding overgrazing can reduce the hazard of erosion.
- Maintaining healthy plants and a vegetative cover can reduce the hazard of erosion.
- Erosion control is needed when pastures are renovated.

Woodland
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- Rock fragments obstruct the use of mechanical planting equipment.
- Because of the content of rock fragments, the use of mechanical planting equipment is not practical.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- Stones restrict the use of equipment during site preparation for planting or seeding.

- Because of the stickiness of the soil, the use of equipment for site preparation is restricted to the drier periods.

FuD—Fullerton-Pailo complex, 12 to 20 percent slopes

Map Unit Composition

Major components
Fullerton and similar soils: 60 to 85 percent
Pailo and similar soils: 15 to 30 percent

Contrasting inclusions
Minvale soils: 0 to 10 percent

Component Descriptions

Fullerton
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Ridge on upland
Landform position (two-dimensional): Backslope
Slope shape (down, across): Convex, convex
Parent material: Clayey residuum or creep deposits over clayey residuum weathered from cherty limestone
Slope range: 12 to 20 percent
Surface fragments: None
Depth to restrictive feature: Greater than 80 inches
Drainage class: Well drained
Slowest permeability: Moderate (about 0.60 in/hr)
Available water capacity to 60 inches: Moderate (about 7.3 inches)
Shrink-swell potential: Moderate (about 4.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: Medium
Land capability class (non-irrigated): 4e
Hydric soil: No

Typical profile:
H1—0 to 7 inches; gravelly silt loam
H2—7 to 70 inches; gravelly clay

Pailo
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Ridge on upland
Landform position (two-dimensional): Summit
Slope shape (down, across): Convex, convex
Parent material: Loamy-skeletal residuum weathered from cherty limestone or creep deposits derived from cherty limestone over skeletal loamy residuum weathered from cherty limestone
Slope range: 12 to 20 percent
Surface fragments: None
Depth to restrictive feature: Greater than 80 inches
Drainage class: Somewhat excessively drained
Slowest permeability: Moderately rapid (about 2.00 in/hr)
Available water capacity to 60 inches: Low (about 5.1 inches)
Shrink-swell potential: Low (about 1.5 LEP)

Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: Medium
Land capability class (non-irrigated): 4e
Hydric soil: No

Typical profile:
H1—0 to 15 inches; gravelly silt loam
H2—15 to 40 inches; very gravelly silty clay loam
H3—40 to 80 inches; gravelly clay

Use and Management Considerations

Cropland
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and help to minimize soil loss by erosion.
- The rooting depth of crops may be restricted by the high clay content.

Pasture and hayland
- Avoiding overgrazing can reduce the hazard of erosion.
- Maintaining healthy plants and a vegetative cover can reduce the hazard of erosion.
- Erosion control is needed when pastures are renovated.

Woodland
- If the soil is disturbed, the slope increases the hazard of erosion.
- The slope increases excavation costs, poses safety hazards, and creates a potential for erosion during the construction of haul roads and log landings.
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- Rock fragments obstruct the use of mechanical planting equipment.
- Because of the content of rock fragments, the use of mechanical planting equipment is not practical.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- The slope restricts the use of equipment for preparing sites for planting and seeding.
- Stones restrict the use of equipment during site preparation for planting or seeding.
- Because of the stickiness of the soil, the use of equipment for site preparation is restricted to the drier periods.

FuE—Fullerton-Pailo complex, 20 to 35 percent slopes

Map Unit Composition

Major components
Fullerton and similar soils: 60 to 85 percent
Pailo and similar soils: 15 to 35 percent

Contrasting inclusions
Minvale soils: 0 to 5 percent

Component Descriptions

Fullerton
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Ridge on upland
Landform position (two-dimensional): Backslope
Slope shape (down, across): Linear, convex
Parent material: Clayey residuum or creep deposits over clayey residuum weathered from cherty limestone
Slope range: 20 to 35 percent
Surface fragments: None
Depth to restrictive feature: Greater than 80 inches
Drainage class: Well drained
Slowest permeability: Moderate (about 0.60 in/hr)
Available water capacity to 60 inches: Moderate (about 7.3 inches)
Shrink-swell potential: Moderate (about 4.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: High
Land capability class (non-irrigated): 6e
Hydric soil: No

Typical profile:
H1—0 to 7 inches; gravelly silt loam
H2—7 to 70 inches; gravelly clay

Pailo
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Ridge on upland
Landform position (two-dimensional): Backslope
Slope shape (down, across): Linear, convex
Parent material: Loamy-skeletal residuum weathered from cherty limestone or creep deposits derived from cherty limestone over skeletal loamy residuum weathered from cherty limestone
Slope range: 20 to 35 percent
Surface fragments: None
Depth to restrictive feature: Greater than 80 inches
Drainage class: Somewhat excessively drained
Slowest permeability: Moderately rapid (about 2.00 in/hr)
Available water capacity to 60 inches: Low (about 5.1 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: High
Land capability class (non-irrigated): 6e
Hydric soil: No

Typical profile:
H1—0 to 15 inches; gravelly silt loam
H2—15 to 40 inches; very gravelly silty clay loam
H3—40 to 80 inches; gravelly clay

Use and Management Considerations

Cropland
- These soils are generally not suited to cropland.
- The slope and the erosion hazard generally make cultivation impractical.

Pasture and hayland
- Avoiding overgrazing can reduce the hazard of erosion.
- Maintaining healthy plants and a vegetative cover can reduce the hazard of erosion.
- The slope may restrict the use of some farm equipment.

Woodland
- If the soil is disturbed, the slope increases the hazard of erosion.
- The slope increases excavation costs, poses safety hazards, and creates a potential for erosion during the construction of haul roads and log landings.
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and of harvesting and mechanical planting equipment.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.
- Because of the slope, the use of mechanical planting equipment is not practical.
- Rock fragments obstruct the use of mechanical planting equipment.
- Because of the content of rock fragments, the use of mechanical planting equipment is not practical.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- The slope restricts the use of equipment for preparing sites for planting and seeding.
- Stones restrict the use of equipment during site preparation for planting or seeding.
- Because of the stickiness of the soil, the use of equipment for site preparation is restricted to the drier periods.

FwD—Fullerton-Dewey-Urban land complex, 5 to 20 percent slopes

Map Unit Composition

Major components
Fullerton and similar soils: 30 to 55 percent
Dewey and similar soils: 30 to 40 percent
Urban land: 15 to 30 percent

Component Descriptions

Fullerton
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Ridge on upland
Landform position (two-dimensional): Backslope
Slope shape (down, across): Convex, convex
Parent material: Clayey residuum or creep deposits over clayey residuum weathered from cherty limestone
Slope range: 5 to 20 percent
Surface fragments: None

Depth to restrictive feature: Greater than 80 inches
Drainage class: Well drained
Slowest permeability: Moderate (about 0.60 in/hr)
Available water capacity to 60 inches: Moderate (about 7.3 inches)
Shrink-swell potential: Moderate (about 4.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: Medium
Land capability class (non-irrigated): Unspecified
Hydric soil: No

Typical profile:
H1—0 to 7 inches; gravelly silt loam
H2—7 to 70 inches; gravelly clay

Dewey
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Ridge on upland
Landform position (two-dimensional): Backslope
Slope shape (down, across): Convex, convex
Parent material: Clayey residuum weathered from limestone or alluvium over residuum weathered from limestone
Slope range: 5 to 20 percent
Surface fragments: None
Depth to restrictive feature: Greater than 80 inches
Drainage class: Well drained
Slowest permeability: Moderate (about 0.57 in/hr)
Available water capacity to 60 inches: High (about 9.5 inches)
Shrink-swell potential: Moderate (about 4.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: Medium
Land capability class (non-irrigated): Unspecified
Hydric soil: No

Typical profile:
H1—0 to 7 inches; silt loam
H2—7 to 27 inches; silty clay loam
H3—27 to 80 inches; silty clay

Urban land
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Unspecified
Parent material: Areas where the surface is covered by roads, streets, parking lots, commercial buildings, houses, and other types of impervious ground cover (in places natural drainage has been altered by a system of ditches and storm drains)
Slope range: Unspecified
Surface fragments: None
Depth to restrictive feature: Greater than 80 inches
Drainage class: Unspecified
Slowest permeability: Unspecified
Available water capacity to 60 inches: Unspecified
Shrink-swell potential: Unspecified
Flooding hazard: None

Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: Unspecified
Land capability class (non-irrigated): Unspecified
Hydric soil: No

FwE—Fullerton-Dewey-Urban land complex, 20 to 35 percent slopes

Map Unit Composition

Major components
Fullerton and similar soils: 30 to 55 percent
Dewey and similar soils: 30 to 40 percent
Urban land: 15 to 30 percent

Component Descriptions

Fullerton
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Ridge on upland
Landform position (two-dimensional): Backslope
Slope shape (down, across): Linear, convex
Parent material: Clayey residuum or creep deposits over clayey residuum weathered from cherty limestone
Slope range: 20 to 35 percent
Surface fragments: None
Depth to restrictive feature: Greater than 80 inches
Drainage class: Well drained
Slowest permeability: Moderate (about 0.60 in/hr)
Available water capacity to 60 inches: Moderate (about 7.3 inches)
Shrink-swell potential: Moderate (about 4.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: High
Land capability class (non-irrigated): Unspecified
Hydric soil: No

Typical profile:
H1—0 to 7 inches; gravelly silt loam
H2—7 to 60 inches; gravelly clay

Dewey
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Ridge on upland
Landform position (two-dimensional): Backslope
Slope shape (down, across): Linear, convex
Parent material: Clayey residuum weathered from limestone or alluvium over residuum weathered from limestone
Slope range: 20 to 35 percent
Surface fragments: None
Depth to restrictive feature: Greater than 80 inches
Drainage class: Well drained
Slowest permeability: Moderate (about 0.57 in/hr)

Available water capacity to 60 inches: High (about 9.5 inches)
Shrink-swell potential: Moderate (about 4.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: High
Land capability class (non-irrigated): Unspecified
Hydric soil: No

Typical profile:
H1—0 to 7 inches; silt loam
H2—7 to 27 inches; silty clay loam
H3—27 to 60 inches; silty clay

Urban land
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Unspecified
Parent material: Areas where the surface is covered by roads, streets, parking lots, commercial buildings, houses, and other types of impervious ground cover (in places natural drainage has been altered by a system of ditches and storm drains)
Slope range: 20 to 35 percent
Surface fragments: None
Depth to restrictive feature: Greater than 80 inches
Drainage class: Unspecified
Slowest permeability: Unspecified
Available water capacity to 60 inches: Unspecified
Shrink-swell potential: Unspecified
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: Unspecified
Land capability class (non-irrigated): Unspecified
Hydric soil: No

GnD—Gilpin silt loam, 12 to 20 percent slopes

Map Unit Composition

Major components
Gilpin and similar soils: 90 to 95 percent

Contrasting inclusions
Petros soils: 0 to 5 percent
Shelocta soils: 0 to 5 percent

Component Descriptions

Gilpin
MLRA: 125 - Cumberland Plateau and Mountains
Landform: Hillslope on upland
Landform position (two-dimensional): Backslope
Slope shape (down, across): Convex, linear
Parent material: Fine-loamy residuum weathered from sandstone, siltstone, and shale
Slope range: 12 to 20 percent
Surface fragments: None
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock

Drainage class: Well drained
Slowest permeability: Moderately slow (about 0.20 in/hr)
Available water capacity to 60 inches: Low (about 3.7 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: Medium
Land capability class (non-irrigated): 4e
Hydric soil: No

Typical profile:
H1—0 to 6 inches; silt loam
H2—6 to 21 inches; silty clay loam
H3—21 to 25 inches; channery silty clay loam
H4—25 to 35 inches; weathered bedrock

Use and Management Considerations

Cropland

- Using a system of conservation tillage and planting cover crops reduce the runoff rate and help to minimize soil loss by erosion.
- Incorporating crop residue or other organic matter into the surface layer increases the capacity of the soil to hold and retain moisture. Plants may suffer from moisture stress because of the limited available water capacity.
- Controlling traffic can minimize soil compaction.
- Maintaining or increasing the content of organic matter in the soil helps to prevent crusting, improves tilth, and increases the rate of water infiltration.

Pasture and hayland

- Avoiding overgrazing can reduce the hazard of erosion.
- Maintaining healthy plants and a vegetative cover can reduce the hazard of erosion.
- Erosion control is needed when pastures are renovated.
- Plants may suffer from moisture stress during the drier summer months because of the limited available water capacity.
- Using a system of seedbed preparation that minimizes soil disturbance when pastures are renovated conserves soil moisture.
- This soil provides poor summer pasture.

Woodland

- If the soil is disturbed, the slope increases the hazard of erosion.
- The slope increases excavation costs, poses safety hazards, and creates a potential for erosion during the construction of haul roads and log landings.
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- Rock fragments obstruct the use of mechanical planting equipment.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- The slope restricts the use of equipment for preparing sites for planting and seeding.

GpE—Gilpin-Petros complex, 20 to 35 percent slopes

Map Unit Composition

Major components
Gilpin and similar soils: 40 to 70 percent
Petros and similar soils: 30 to 50 percent

Contrasting inclusions
Lily soils: 0 to 5 percent
Shelocta soils: 0 to 5 percent

Component Descriptions

Gilpin
MLRA: 125 - Cumberland Plateau and Mountains
Landform: Mountain slope on mountains
Slope shape (down, across): Linear, convex
Parent material: Fine-loamy residuum weathered from sandstone, siltstone, and shale
Slope range: 20 to 35 percent
Surface fragments: None
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Drainage class: Well drained
Slowest permeability: Moderately slow (about 0.20 in/hr)
Available water capacity to 60 inches: Low (about 3.7 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: High
Land capability class (non-irrigated): 7s
Hydric soil: No

Typical profile:
H1—0 to 6 inches; silt loam
H2—6 to 21 inches; silty clay loam
H3—21 to 25 inches; channery silty clay loam
H4—25 to 35 inches; weathered bedrock

Petros
MLRA: 125 - Cumberland Plateau and Mountains
Landform: Mountain slope on mountains
Slope shape (down, across): Linear, convex
Parent material: Loamy-skeletal residuum weathered from shale and siltstone
Slope range: 20 to 35 percent
Surface fragments: None
Depth to restrictive feature: 10 to 20 inches to paralithic bedrock
Drainage class: Excessively drained
Slowest permeability: Very slow to impermeable (about 0.00 in/hr)
Available water capacity to 60 inches: Very low (about 1.2 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: High
Land capability class (non-irrigated): 7s
Hydric soil: No

Typical profile:

H1—0 to 2 inches; channery silt loam
H2—2 to 8 inches; very channery silt loam
H3—8 to 16 inches; extremely channery silt loam
H4—16 to 18 inches; weathered bedrock

Use and Management Considerations

Cropland
- These soils are generally not suited to cropland.
- The slope and the erosion hazard generally make cultivation impractical.

Pasture and hayland
- These soils are generally not recommended for pasture.

Woodland
- If the soil is disturbed, the slope increases the hazard of erosion.
- The slope increases excavation costs, poses safety hazards, and creates a potential for erosion during the construction of haul roads and log landings.
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- Sandy layers increase the maintenance of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and of harvesting and mechanical planting equipment.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.
- Sandy layers may slough, thus reducing the efficiency of mechanical planting equipment.
- Because of the slope, the use of mechanical planting equipment is not practical.
- Rock fragments obstruct the use of mechanical planting equipment.
- Because of the content of rock fragments, the use of mechanical planting equipment is not practical.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- The slope restricts the use of equipment for preparing sites for planting and seeding.
- Stones restrict the use of equipment during site preparation for planting or seeding.

GpF—Gilpin-Petros complex, 35 to 80 percent slopes

Map Unit Composition

Major components
Gilpin and similar soils: 50 to 80 percent
Petros and similar soils: 20 to 39 percent

Contrasting inclusions
Shelocta soils: 0 to 6 percent
Lily soils: 0 to 5 percent

Component Descriptions

Gilpin
MLRA: 125 - Cumberland Plateau and Mountains
Landform: Mountain slope on mountains
Slope shape (down, across): Linear, convex
Parent material: Fine-loamy residuum weathered from sandstone, siltstone, and shale
Slope range: 35 to 70 percent

Surface fragments: None
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Drainage class: Well drained
Slowest permeability: Moderately slow (about 0.20 in/hr)
Available water capacity to 60 inches: Low (about 3.7 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: Medium
Land capability class (non-irrigated): 7s
Hydric soil: No

Typical profile:
H1—0 to 6 inches; silt loam
H2—6 to 21 inches; silty clay loam
H3—21 to 25 inches; channery silty clay loam
H4—25 to 35 inches; weathered bedrock

Petros
MLRA: 125 - Cumberland Plateau and Mountains
Landform: Mountain slope on mountains
Slope shape (down, across): Linear, convex
Parent material: Loamy-skeletal residuum weathered from shale and siltstone
Slope range: 35 to 80 percent
Surface fragments: None
Depth to restrictive feature: 10 to 20 inches to paralithic bedrock
Drainage class: Excessively drained
Slowest permeability: Very slow to impermeable (about 0.00 in/hr)
Available water capacity to 60 inches: Very low (about 1.2 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: Medium
Land capability class (non-irrigated): 7s
Hydric soil: No

Typical profile:
H1—0 to 2 inches; channery silt loam
H2—2 to 8 inches; very channery silt loam
H3—8 to 16 inches; extremely channery silt loam
H4—16 to 18 inches; weathered bedrock

Use and Management Considerations

Cropland
- These soils are generally not suited to cropland.
- The slope and the erosion hazard generally make cultivation impractical.

Pasture and hayland
- These soils are generally not recommended for pasture.
- Steep slopes generally make establishing pastures impractical.

Woodland
- If the soil is disturbed, the slope increases the hazard of erosion.

- The slope increases excavation costs, poses safety hazards, and creates a potential for erosion during the construction of haul roads and log landings.
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- Sandy layers increase the maintenance of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and of harvesting and mechanical planting equipment.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.
- Sandy layers may slough, thus reducing the efficiency of mechanical planting equipment.
- Because of the slope, the use of equipment to prepare sites for planting and seeding is not practical.
- Because of the slope, the use of mechanical planting equipment is not practical.
- Rock fragments obstruct the use of mechanical planting equipment.
- Because of the content of rock fragments, the use of mechanical planting equipment is not practical.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- Stones restrict the use of equipment during site preparation for planting or seeding.

GsF—Gilpin-Bouldin-Petros complex, 25 to 80 percent slopes, very stony

Map Unit Composition

Major components
Gilpin and similar soils: 27 to 50 percent
Bouldin and similar soils: 31 to 40 percent
Petros and similar soils: 19 to 28 percent

Contrasting inclusions
Shelocta soils: 0 to 5 percent

Component Descriptions

Gilpin
MLRA: 125 - Cumberland Plateau and Mountains
Landform: Mountain slope on mountains
Slope shape (down, across): Convex, convex
Parent material: Fine-loamy residuum weathered from sandstone, siltstone, and shale
Slope range: 25 to 70 percent
Surface fragments: About 0.50 to 1.00 percent subrounded stones
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Drainage class: Well drained
Slowest permeability: Moderately slow (about 0.20 in/hr)
Available water capacity to 60 inches: Low (about 3.7 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: Medium
Land capability class (non-irrigated): 7s
Hydric soil: No

Typical profile:
H1—0 to 6 inches; silt loam
H2—6 to 21 inches; silty clay loam
H3—21 to 25 inches; channery silty clay loam
H4—25 to 35 inches; weathered bedrock

Bouldin
MLRA: 125 - Cumberland Plateau and Mountains
Landform: Mountain slope on mountains
Slope shape (down, across): Concave, concave
Parent material: Loamy-skeletal colluvium derived from limestone, sandstone, and shale
Slope range: 30 to 75 percent
Surface fragments: About 1.00 to 3.00 percent subrounded stones and about 0.10 to 0.20 percent subrounded boulders
Depth to restrictive feature: Greater than 80 inches
Drainage class: Well drained
Slowest permeability: Moderately rapid (about 2.00 in/hr)
Available water capacity to 60 inches: Low (about 4.8 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: Medium
Land capability class (non-irrigated): 7s
Hydric soil: No

Typical profile:
H1—0 to 2 inches; flaggy loam
H2—2 to 17 inches; very channery loam
H3—17 to 30 inches; very channery loam
H4—30 to 80 inches; extremely flaggy clay loam

Petros
MLRA: 125 - Cumberland Plateau and Mountains
Landform: Mountain slope on mountains
Slope shape (down, across): Convex, convex
Parent material: Loamy-skeletal residuum weathered from shale and siltstone
Slope range: 25 to 80 percent
Surface fragments: About 0.50 to 1.00 percent subrounded stones
Depth to restrictive feature: 10 to 20 inches to paralithic bedrock
Drainage class: Excessively drained
Slowest permeability: Very slow to impermeable (about 0.00 in/hr)
Available water capacity to 60 inches: Very low (about 1.2 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: Medium
Land capability class (non-irrigated): 7s
Hydric soil: No

Typical profile:
H1—0 to 2 inches; channery silt loam
H2—2 to 8 inches; very channery silt loam

H3—8 to 16 inches; extremely channery silt loam
H4—16 to 18 inches; weathered bedrock

Use and Management Considerations

Cropland
- These soils are generally not suited to cropland.
- The slope and the erosion hazard generally make cultivation impractical.

Pasture and hayland
- These soils are generally not recommended for pasture.
- Steep slopes generally make establishing pastures impractical.

Woodland
- If the soil is disturbed, the slope increases the hazard of erosion.
- The slope increases excavation costs, poses safety hazards, and creates a potential for erosion during the construction of haul roads and log landings.
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- Sandy layers increase the maintenance of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and of harvesting and mechanical planting equipment.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.
- Stones or boulders on the surface obstruct the use of mechanical planting equipment.
- Sandy layers may slough, thus reducing the efficiency of mechanical planting equipment.
- Because of the slope, the use of equipment to prepare sites for planting and seeding is not practical.
- Because of the slope, the use of mechanical planting equipment is not practical.
- Because of the content of rock fragments, the use of mechanical planting equipment is not practical.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- Stones restrict the use of equipment during site preparation for planting or seeding.
- Uncontrolled burning may destroy organic matter.

Ha—Hamblen silt loam, occasionally flooded

Map Unit Composition

Major components
Hamblen and similar soils: 80 to 98 percent

Contrasting inclusions
Cranmore soils: 1 to 10 percent
Staser soils: 1 to 10 percent

Component Descriptions

Hamblen
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Flood plain in valley
Slope shape (down, across): Concave, linear
Parent material: Fine-loamy alluvium derived from limestone, sandstone, and shale
Slope range: 0 to 3 percent
Surface fragments: None

Depth to restrictive feature: Greater than 80 inches
Drainage class: Moderately well drained
Slowest permeability: Moderate (about 0.60 in/hr)
Available water capacity to 60 inches: High (about 11.0 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: Occasional
Ponding hazard: None
Seasonal water saturation (depth, kind): About 24 to 36 inches, apparent water table
Runoff class: Negligible
Land capability class (non-irrigated): 2w
Hydric soil: No

Typical profile:
H1—0 to 5 inches; silt loam
H2—5 to 43 inches; silt loam
H3—43 to 62 inches; loam

Use and Management Considerations

Cropland
- All areas of this map unit are prime farmland.
- Careful selection and application of chemicals and fertilizers help to minimize the possibility of ground-water contamination.
- Controlling traffic can minimize soil compaction.
- Maintaining or increasing the content of organic matter in the soil helps to prevent crusting, improves tilth, and increases the rate of water infiltration.
- Measures that protect the soil from scouring and minimize the loss of crop residue by floodwaters are needed.
- Small grain crops may be damaged by flooding in winter and spring.

Pasture and hayland
- Forage production can be improved by seeding grass-legume mixtures that are tolerant of flooding.
- Sediment left on forage plants after a flood event may reduce palatability and forage intake by the grazing animal.

Woodland
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- Flooding may result in damage to haul roads and increased maintenance costs.
- Flooding restricts the safe use of roads by log trucks.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.

HeB—Hendon silt loam, 2 to 5 percent slopes

Map Unit Composition

Major components
Hendon and similar soils: 90 to 100 percent

Contrasting inclusions
Lily soils: 0 to 5 percent
Ramsey soils: 0 to 5 percent

Component Descriptions

Hendon

MLRA: 125 - Cumberland Plateau and Mountains
Landform: Ridge on plateau
Landform position (two-dimensional): Summit
Slope shape (down, across): Linear, convex
Parent material: Silty mantle over fine-loamy residuum weathered from interbedded siltstone, sandstone, and shale
Slope range: 2 to 5 percent
Surface fragments: None
Depth to restrictive feature: 20 to 40 inches to fragipan
Drainage class: Well drained
Slowest permeability: Moderate (about 0.60 in/hr)
Available water capacity to 60 inches: High (about 9.8 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: Low
Land capability class (non-irrigated): 2e
Hydric soil: No

Typical profile:
H1—0 to 2 inches; silt loam
H2—2 to 9 inches; silt loam
H3—9 to 22 inches; silty clay loam
H4—22 to 30 inches; clay loam
H5—30 to 80 inches; clay loam

Use and Management Considerations

Cropland

- All areas of this map unit are prime farmland.
- Grassed waterways can be used in some areas to slow and direct the movement of water and minimize erosion.
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and help to minimize soil loss by erosion.
- Incorporating crop residue or other organic matter into the surface layer increases the capacity of the soil to hold and retain moisture. Plants may suffer from moisture stress because of the limited available water capacity.
- Controlling traffic can minimize soil compaction.
- Maintaining or increasing the content of organic matter in the soil helps to prevent crusting, improves tilth, and increases the rate of water infiltration.
- The rooting depth of crops is restricted by dense soil material.

Pasture and hayland

- Erosion control is needed when pastures are renovated.
- Plants may suffer from moisture stress during the drier summer months because of the limited available water capacity.
- Using a system of seedbed preparation that minimizes soil disturbance when pastures are renovated conserves soil moisture.
- This soil provides poor summer pasture.
- The rooting depth of plants may be restricted by a dense soil layer.

Woodland

- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

HeC—Hendon silt loam, 5 to 12 percent slopes

Map Unit Composition

Major components
Hendon and similar soils: 90 to 100 percent

Contrasting inclusions
Gilpin soils: 0 to 10 percent

Component Descriptions

Hendon
MLRA: 125 - Cumberland Plateau and Mountains
Landform: Ridge on plateau
Landform position (two-dimensional): Backslope
Slope shape (down, across): Linear, convex
Parent material: Silty mantle over fine-loamy residuum weathered from interbedded siltstone, sandstone, and shale
Slope range: 5 to 12 percent
Surface fragments: None
Depth to restrictive feature: 20 to 40 inches to fragipan
Drainage class: Well drained
Slowest permeability: Moderate (about 0.60 in/hr)
Available water capacity to 60 inches: High (about 9.8 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: Medium
Land capability class (non-irrigated): 3e
Hydric soil: No

Typical profile:
H1—0 to 2 inches; silt loam
H2—2 to 9 inches; silt loam
H3—9 to 22 inches; silty clay loam
H4—22 to 30 inches; clay loam
H5—30 to 80 inches; clay loam

Use and Management Considerations

Cropland

- Grassed waterways can be used in some areas to slow and direct the movement of water and minimize erosion.

- Using a system of conservation tillage and planting cover crops reduce the runoff rate and help to minimize soil loss by erosion.
- Incorporating crop residue or other organic matter into the surface layer increases the capacity of the soil to hold and retain moisture. Plants may suffer from moisture stress because of the limited available water capacity.
- Controlling traffic can minimize soil compaction.
- Maintaining or increasing the content of organic matter in the soil helps to prevent crusting, improves tilth, and increases the rate of water infiltration.
- The rooting depth of crops is restricted by dense soil material.

Pasture and hayland
- Avoiding overgrazing can reduce the hazard of erosion.
- Maintaining healthy plants and a vegetative cover can reduce the hazard of erosion.
- Erosion control is needed when pastures are renovated.
- Plants may suffer from moisture stress during the drier summer months because of the limited available water capacity.
- Using a system of seedbed preparation that minimizes soil disturbance when pastures are renovated conserves soil moisture.
- This soil provides poor summer pasture.
- The rooting depth of plants may be restricted by a dense soil layer.

Woodland
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

JeC—Jefferson loam, 5 to 12 percent slopes

Map Unit Composition

Major components
Jefferson and similar soils: 90 to 100 percent

Contrasting inclusions
Allen soils: 0 to 10 percent

Component Descriptions

Jefferson
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Mountain slope on mountains (fig. 2)
Slope shape (down, across): Convex, concave
Parent material: Fine-loamy colluvium derived from interbedded sedimentary rock
Slope range: 5 to 12 percent
Surface fragments: None
Depth to restrictive feature: 40 to 58 inches to bedrock
Drainage class: Well drained
Slowest permeability: Moderate (about 0.60 in/hr)
Available water capacity to 60 inches: Moderate (about 8.9 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None

Figure 2.—A variety of soils are found where the base of the Cumberland Plateau meets the Southern Appalachian Ridges and Valleys. Jefferson loam, 5 to 12 percent slopes, is in the foreground; Dewey silt loam, 5 to 12 percent slopes, is in the background on the hillside; and Minvale gravelly silt loam, 5 to 12 percent slopes, is on the footslope.

Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: Medium
Land capability class (non-irrigated): 3e
Hydric soil: No

Typical profile:
H1—0 to 11 inches; loam
H2—11 to 35 inches; clay loam
H3—35 to 48 inches; gravelly loam
H4—48 to 58 inches; gravelly fine sandy loam

Use and Management Considerations

Cropland

- Grassed waterways can be used in some areas to slow and direct the movement of water and minimize erosion.
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and help to minimize soil loss by erosion.
- Careful selection and application of chemicals and fertilizers help to minimize the possibility of ground-water contamination.

Pasture and hayland
- Erosion control is needed when pastures are renovated.

Woodland
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- Rock fragments obstruct the use of mechanical planting equipment.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

JeE—Jefferson loam, 12 to 35 percent slopes

Map Unit Composition

Major components
Jefferson and similar soils: 80 to 95 percent

Contrasting inclusions
Bouldin soils: 2 to 8 percent
Ramsey soils: 2 to 8 percent
Lily soils: 1 to 4 percent

Component Descriptions

Jefferson
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Mountain slope on mountains
Slope shape (down, across): Linear, concave
Parent material: Fine-loamy colluvium derived from interbedded sedimentary rock
Slope range: 12 to 35 percent
Surface fragments: None
Depth to restrictive feature: 40 to 58 inches to bedrock
Drainage class: Well drained
Slowest permeability: Moderate (about 0.60 in/hr)
Available water capacity to 60 inches: Moderate (about 8.9 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: Medium
Land capability class (non-irrigated): 6e
Hydric soil: No

Typical profile:
H1—0 to 11 inches; loam
H2—11 to 35 inches; clay loam
H3—35 to 48 inches; gravelly loam
H4—48 to 58 inches; gravelly fine sandy loam

Use and Management Considerations

Cropland
- This soil is generally not suited to cropland.

Pasture and hayland
- Avoiding overgrazing can reduce the hazard of erosion.
- Maintaining healthy plants and a vegetative cover can reduce the hazard of erosion.
- Erosion control is needed when pastures are renovated.

Woodland
- If the soil is disturbed, the slope increases the hazard of erosion.
- The slope increases excavation costs, poses safety hazards, and creates a potential for erosion during the construction of haul roads and log landings.
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and of harvesting and mechanical planting equipment.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- Rock fragments obstruct the use of mechanical planting equipment.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- The slope restricts the use of equipment for preparing sites for planting and seeding.

JnD—Jefferson cobbly loam, 12 to 20 percent slopes

Map Unit Composition

Major components
Jefferson and similar soils: 90 to 98 percent

Contrasting inclusions
Gilpin soils: 1 to 5 percent
Ramsey soils: 1 to 5 percent

Component Descriptions

Jefferson
MLRA: 125 - Cumberland Plateau and Mountains
Landform: Mountain slope on mountains
Slope shape (down, across): Linear, concave
Parent material: Fine-loamy colluvium derived from interbedded sedimentary rock
Slope range: 12 to 20 percent
Surface fragments: None
Depth to restrictive feature: 40 to 58 inches to bedrock
Drainage class: Well drained
Slowest permeability: Moderately rapid (about 1.98 in/hr)
Available water capacity to 60 inches: Moderate (about 6.6 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet

Land capability class (non-irrigated): 6s
Hydric soil: No

Typical profile:
H1—0 to 7 inches; cobbly loam
H2—7 to 40 inches; cobbly loam
H3—40 to 56 inches; very cobbly clay loam
H4—56 to 58 inches; very gravelly sandy loam

Use and Management Considerations

Cropland
- This soil is generally not suited to cropland.

Pasture and hayland
- Avoiding overgrazing can reduce the hazard of erosion.
- Maintaining healthy plants and a vegetative cover can reduce the hazard of erosion.
- Erosion control is needed when pastures are renovated.

Woodland
- If the soil is disturbed, the slope increases the hazard of erosion.
- The slope increases excavation costs, poses safety hazards, and creates a potential for erosion during the construction of haul roads and log landings.
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- Rock fragments obstruct the use of mechanical planting equipment.
- The slope restricts the use of equipment for preparing sites for planting and seeding.
- Stones restrict the use of equipment during site preparation for planting or seeding.

JnF—Jefferson cobbly loam, 20 to 50 percent slopes

Map Unit Composition

Major components
Jefferson and similar soils: 90 to 97 percent

Contrasting inclusions
Gilpin soils: 1 to 5 percent
Ramsey soils: 2 to 5 percent

Component Descriptions

Jefferson
MLRA: 125 - Cumberland Plateau and Mountains
Landform: Mountain slope on mountains
Slope shape (down, across): Concave, linear
Parent material: Fine-loamy colluvium derived from interbedded sedimentary rock
Slope range: 20 to 50 percent
Surface fragments: None

Depth to restrictive feature: 40 to 58 inches to bedrock
Drainage class: Well drained
Slowest permeability: Moderately rapid (about 1.98 in/hr)
Available water capacity to 60 inches: Moderate (about 6.6 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Land capability class (non-irrigated): 7s
Hydric soil: No

Typical profile:
H1—0 to 7 inches; cobbly loam
H2—7 to 40 inches; cobbly loam
H3—40 to 56 inches; very cobbly clay loam
H4—56 to 58 inches; very gravelly sandy loam

Use and Management Considerations

Cropland
- This soil is generally not suited to cropland.
- The slope and the erosion hazard generally make cultivation impractical.

Pasture and hayland
- This soil is generally not recommended for pasture.
- Steep slopes generally make establishing pastures impractical.

Woodland
- If the soil is disturbed, the slope increases the hazard of erosion.
- The slope increases excavation costs, poses safety hazards, and creates a potential for erosion during the construction of haul roads and log landings.
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and of harvesting and mechanical planting equipment.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.
- Because of the slope, the use of equipment to prepare sites for planting and seeding is not practical.
- Because of the slope, the use of mechanical planting equipment is not practical.
- Rock fragments obstruct the use of mechanical planting equipment.
- Stones restrict the use of equipment during site preparation for planting or seeding.

LbB—Lily loam, 2 to 5 percent slopes

Map Unit Composition

Major components
Lily and similar soils: 80 to 98 percent

Contrasting inclusions
Lonewood soils: 2 to 10 percent
Gilpin soils: 0 to 5 percent
Ramsey soils: 0 to 5 percent

Component Descriptions

Lily
MLRA: 125 - Cumberland Plateau and Mountains
Landform: Hillslope on upland
Landform position (two-dimensional): Summit
Slope shape (down, across): Convex, convex
Parent material: Fine-loamy residuum weathered from sandstone
Slope range: 2 to 5 percent
Surface fragments: None
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Drainage class: Well drained
Slowest permeability: Impermeable (about 0.00 in/hr)
Available water capacity to 60 inches: Low (about 4.5 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: Low
Land capability class (non-irrigated): 2e
Hydric soil: No

Typical profile:
H1—0 to 3 inches; loam
H2—3 to 30 inches; loam
H3—30 to 37 inches; unweathered bedrock

Use and Management Considerations

Cropland
- All areas of this map unit are prime farmland.
- Grassed waterways can be used in some areas to slow and direct the movement of water and minimize erosion.
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and help to minimize soil loss by erosion.
- Incorporating crop residue or other organic matter into the surface layer increases the capacity of the soil to hold and retain moisture. Plants may suffer from moisture stress because of the limited available water capacity.

Pasture and hayland
- Erosion control is needed when pastures are renovated.
- Plants may suffer from moisture stress during the drier summer months because of the limited available water capacity.
- Using a system of seedbed preparation that minimizes soil disturbance when pastures are renovated conserves soil moisture.
- This soil provides poor summer pasture.

Woodland
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.

LbC—Lily loam, 5 to 12 percent slopes

Map Unit Composition

Major components
Lily and similar soils: 90 to 100 percent

Contrasting inclusions
Gilpin soils: 0 to 5 percent
Shelocta soils: 0 to 5 percent

Component Descriptions

Lily
MLRA: 125 - Cumberland Plateau and Mountains
Landform: Hillslope on upland
Landform position (two-dimensional): Backslope
Slope shape (down, across): Convex, convex
Parent material: Fine-loamy residuum weathered from sandstone
Slope range: 5 to 12 percent
Surface fragments: None
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Drainage class: Well drained
Slowest permeability: Impermeable (about 0.00 in/hr)
Available water capacity to 60 inches: Low (about 4.5 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: Medium
Land capability class (non-irrigated): 3e
Hydric soil: No

Typical profile:
H1—0 to 3 inches; loam
H2—3 to 30 inches; loam
H3—30 to 37 inches; unweathered bedrock

Use and Management Considerations

Cropland
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and help to minimize soil loss by erosion.
- Incorporating crop residue or other organic matter into the surface layer increases the capacity of the soil to hold and retain moisture. Plants may suffer from moisture stress because of the limited available water capacity.

Pasture and hayland
- Avoiding overgrazing can reduce the hazard of erosion.
- Maintaining healthy plants and a vegetative cover can reduce the hazard of erosion.
- Erosion control is needed when pastures are renovated.
- Plants may suffer from moisture stress during the drier summer months because of the limited available water capacity.
- Using a system of seedbed preparation that minimizes soil disturbance when pastures are renovated conserves soil moisture.
- This soil provides poor summer pasture.

Woodland

- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.
- The slope may restrict the use of some mechanical planting equipment.

LbD—Lily loam, 12 to 20 percent slopes

Map Unit Composition

Major components
Lily and similar soils: 85 to 95 percent

Contrasting inclusions
Gilpin soils: 0 to 7 percent
Ramsey soils: 5 to 8 percent

Component Descriptions

Lily
MLRA: 125 - Cumberland Plateau and Mountains
Landform: Hillslope on upland
Landform position (two-dimensional): Backslope
Slope shape (down, across): Linear, convex
Parent material: Fine-loamy residuum weathered from sandstone
Slope range: 12 to 20 percent
Surface fragments: None
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Drainage class: Well drained
Slowest permeability: Impermeable (about 0.00 in/hr)
Available water capacity to 60 inches: Low (about 4.5 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: High
Land capability class (non-irrigated): 4e
Hydric soil: No

Typical profile:
H1—0 to 3 inches; loam
H2—3 to 30 inches; loam
H3—30 to 37 inches; unweathered bedrock

Use and Management Considerations

Cropland

- Using a system of conservation tillage and planting cover crops reduce the runoff rate and help to minimize soil loss by erosion.

- Incorporating crop residue or other organic matter into the surface layer increases the capacity of the soil to hold and retain moisture. Plants may suffer from moisture stress because of the limited available water capacity.

Pasture and hayland
- Avoiding overgrazing can reduce the hazard of erosion.
- Maintaining healthy plants and a vegetative cover can reduce the hazard of erosion.
- Erosion control is needed when pastures are renovated.
- Plants may suffer from moisture stress during the drier summer months because of the limited available water capacity.
- Using a system of seedbed preparation that minimizes soil disturbance when pastures are renovated conserves soil moisture.
- This soil provides poor summer pasture.

Woodland
- If the soil is disturbed, the slope increases the hazard of erosion.
- The slope increases excavation costs, poses safety hazards, and creates a potential for erosion during the construction of haul roads and log landings.
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- The slope restricts the use of equipment for preparing sites for planting and seeding.

LgD—Lily-Gilpin complex, 12 to 20 percent slopes

Map Unit Composition

Major components
Lily and similar soils: 41 to 65 percent
Gilpin and similar soils: 35 to 41 percent

Contrasting inclusions
Ramsey soils: 0 to 9 percent
Petros soils: 0 to 5 percent
Sequoia soils: 0 to 2 percent
Shelocta soils: 0 to 2 percent

Component Descriptions

Lily
MLRA: 125 - Cumberland Plateau and Mountains
Landform: Hillslope on upland
Landform position (two-dimensional): Backslope
Slope shape (down, across): Linear, convex
Parent material: Fine-loamy residuum weathered from sandstone
Slope range: 12 to 20 percent
Surface fragments: None
Depth to restrictive feature: 20 to 40 inches to lithic bedrock

Drainage class: Well drained
Slowest permeability: Impermeable (about 0.00 in/hr)
Available water capacity to 60 inches: Low (about 4.5 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: High
Land capability class (non-irrigated): 4e
Hydric soil: No

Typical profile:
H1—0 to 3 inches; loam
H2—3 to 30 inches; loam
H3—30 to 37 inches; unweathered bedrock

Gilpin
MLRA: 125 - Cumberland Plateau and Mountains
Landform: Hillslope on upland
Landform position (two-dimensional): Backslope
Slope shape (down, across): Linear, convex
Parent material: Fine-loamy residuum weathered from sandstone, siltstone, and shale
Slope range: 12 to 20 percent
Surface fragments: None
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Drainage class: Well drained
Slowest permeability: Moderately slow (about 0.20 in/hr)
Available water capacity to 60 inches: Low (about 3.7 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: High
Land capability class (non-irrigated): 4e
Hydric soil: No

Typical profile:
H1—0 to 6 inches; silt loam
H2—6 to 21 inches; silty clay loam
H3—21 to 25 inches; channery silty clay loam
H4—25 to 35 inches; weathered bedrock

Use and Management Considerations

Cropland
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and help to minimize soil loss by erosion.

Pasture and hayland
- Avoiding overgrazing can reduce the hazard of erosion.
- Maintaining healthy plants and a vegetative cover can reduce the hazard of erosion.
- Erosion control is needed when pastures are renovated.

Woodland
- If the soil is disturbed, the slope increases the hazard of erosion.

- The slope increases excavation costs, poses safety hazards, and creates a potential for erosion during the construction of haul roads and log landings.
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- Rock fragments obstruct the use of mechanical planting equipment.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- The slope restricts the use of equipment for preparing sites for planting and seeding.

LgE—Lily-Gilpin complex, 20 to 35 percent slopes

Map Unit Composition

Major components
Lily and similar soils: 42 to 65 percent
Gilpin and similar soils: 35 to 40 percent

Contrasting inclusions
Ramsey soils: 0 to 9 percent
Petros soils: 0 to 5 percent
Sequoia soils: 0 to 4 percent

Component Descriptions

Lily
MLRA: 125 - Cumberland Plateau and Mountains
Landform: Hillslope on upland
Landform position (two-dimensional): Backslope
Slope shape (down, across): Linear, convex
Parent material: Fine-loamy residuum weathered from sandstone
Slope range: 20 to 35 percent
Surface fragments: None
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Drainage class: Well drained
Slowest permeability: Impermeable (about 0.00 in/hr)
Available water capacity to 60 inches: Low (about 4.5 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: High
Land capability class (non-irrigated): 6e
Hydric soil: No

Typical profile:
H1—0 to 3 inches; loam
H2—3 to 30 inches; loam
H3—30 to 37 inches; unweathered bedrock

Gilpin
MLRA: 125 - Cumberland Plateau and Mountains
Landform: Hillslope on upland
Landform position (two-dimensional): Backslope
Slope shape (down, across): Linear, convex
Parent material: Fine-loamy residuum weathered from sandstone, siltstone, and shale
Slope range: 20 to 35 percent
Surface fragments: None
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Drainage class: Well drained
Slowest permeability: Moderately slow (about 0.20 in/hr)
Available water capacity to 60 inches: Low (about 3.7 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: High
Land capability class (non-irrigated): 6e
Hydric soil: No

Typical profile:
H1—0 to 6 inches; silt loam
H2—6 to 21 inches; silty clay loam
H3—21 to 25 inches; channery silty clay loam
H4—25 to 35 inches; weathered bedrock

Use and Management Considerations

Cropland
- These soils are generally not suited to cropland.
- The slope and the erosion hazard generally make cultivation impractical.

Pasture and hayland
- Avoiding overgrazing can reduce the hazard of erosion.
- Maintaining healthy plants and a vegetative cover can reduce the hazard of erosion.
- The slope may restrict the use of some farm equipment.

Woodland
- If the soil is disturbed, the slope increases the hazard of erosion.
- The slope increases excavation costs, poses safety hazards, and creates a potential for erosion during the construction of haul roads and log landings.
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and of harvesting and mechanical planting equipment.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.
- Because of the slope, the use of mechanical planting equipment is not practical.
- Rock fragments obstruct the use of mechanical planting equipment.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- The slope restricts the use of equipment for preparing sites for planting and seeding.

LmD—Lily-Ramsey complex, 12 to 20 percent slopes

Map Unit Composition

Major components
Lily and similar soils: 48 to 68 percent
Ramsey and similar soils: 31 to 40 percent

Contrasting inclusions
Gilpin soils: 0 to 4 percent
Beersheba soils: 1 to 4 percent
Jefferson soils: 0 to 2 percent
Lonewood soils: 0 to 2 percent

Component Descriptions

Lily
MLRA: 125 - Cumberland Plateau and Mountains
Landform: Hillslope on upland
Landform position (two-dimensional): Backslope
Slope shape (down, across): Linear, convex
Parent material: Fine-loamy residuum weathered from sandstone
Slope range: 12 to 20 percent
Surface fragments: None
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Drainage class: Well drained
Slowest permeability: Impermeable (about 0.00 in/hr)
Available water capacity to 60 inches: Low (about 4.5 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: High
Land capability class (non-irrigated): 6e
Hydric soil: No

Typical profile:
H1—0 to 3 inches; loam
H2—3 to 30 inches; loam
H3—30 to 37 inches; unweathered bedrock

Ramsey
MLRA: 125 - Cumberland Plateau and Mountains
Landform: Hillslope on upland
Landform position (two-dimensional): Backslope
Slope shape (down, across): Linear, convex
Parent material: Loamy residuum weathered from sandstone
Slope range: 12 to 20 percent
Surface fragments: None
Depth to restrictive feature: 7 to 20 inches to lithic bedrock
Drainage class: Somewhat excessively drained
Slowest permeability: Very slow to impermeable (about 0.00 in/hr)
Available water capacity to 60 inches: Very low (about 1.8 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet

Runoff class: High
Land capability class (non-irrigated): 6e
Hydric soil: No

Typical profile:
H1—0 to 4 inches; loam
H2—4 to 10 inches; fine sandy loam
H3—10 to 16 inches; channery sandy loam
H4—16 to 18 inches; unweathered bedrock

Use and Management Considerations

Cropland
- These soils are generally not suited to cropland.

Pasture and hayland
- Avoiding overgrazing can reduce the hazard of erosion.
- Maintaining healthy plants and a vegetative cover can reduce the hazard of erosion.
- Erosion control is needed when pastures are renovated.
- Plants may suffer from moisture stress during the drier summer months because of the limited available water capacity.
- Using a system of seedbed preparation that minimizes soil disturbance when pastures are renovated conserves soil moisture.
- These soils provide poor summer pasture.

Woodland
- If the soil is disturbed, the slope increases the hazard of erosion.
- The slope increases excavation costs, poses safety hazards, and creates a potential for erosion during the construction of haul roads and log landings.
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- Rock fragments obstruct the use of mechanical planting equipment.
- The slope restricts the use of equipment for preparing sites for planting and seeding.

LmE—Lily-Ramsey complex, 20 to 35 percent slopes

Map Unit Composition

Major components
Lily and similar soils: 42 to 62 percent
Ramsey and similar soils: 38 to 50 percent

Contrasting inclusions
Beersheba soils: 0 to 2 percent
Gilpin soils: 0 to 2 percent

Jefferson soils: 0 to 2 percent
Lonewood soils: 0 to 2 percent

Component Descriptions

Lily
MLRA: 125 - Cumberland Plateau and Mountains
Landform: Hillslope on upland
Landform position (two-dimensional): Backslope
Slope shape (down, across): Linear, convex
Parent material: Fine-loamy residuum weathered from sandstone
Slope range: 20 to 35 percent
Surface fragments: None
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Drainage class: Well drained
Slowest permeability: Impermeable (about 0.00 in/hr)
Available water capacity to 60 inches: Low (about 4.5 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: High
Land capability class (non-irrigated): 7e
Hydric soil: No

Typical profile:
H1—0 to 3 inches; loam
H2—3 to 30 inches; loam
H3—30 to 37 inches; unweathered bedrock

Ramsey
MLRA: 125 - Cumberland Plateau and Mountains
Landform: Hillslope on upland
Landform position (two-dimensional): Backslope
Slope shape (down, across): Linear, convex
Parent material: Loamy residuum weathered from sandstone
Slope range: 20 to 35 percent
Surface fragments: None
Depth to restrictive feature: 7 to 20 inches to lithic bedrock
Drainage class: Somewhat excessively drained
Slowest permeability: Very slow to impermeable (about 0.00 in/hr)
Available water capacity to 60 inches: Very low (about 1.8 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: High
Land capability class (non-irrigated): 7e
Hydric soil: No

Typical profile:
H1—0 to 4 inches; loam
H2—4 to 10 inches; fine sandy loam
H3—10 to 16 inches; channery sandy loam
H4—16 to 18 inches; unweathered bedrock

Use and Management Considerations

Cropland
- These soils are generally not suited to cropland.
- The slope and the erosion hazard generally make cultivation impractical.

Pasture and hayland
- These soils are generally not recommended for pasture.

Woodland
- If the soil is disturbed, the slope increases the hazard of erosion.
- The slope increases excavation costs, poses safety hazards, and creates a potential for erosion during the construction of haul roads and log landings.
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and of harvesting and mechanical planting equipment.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.
- Because of the slope, the use of mechanical planting equipment is not practical.
- Rock fragments obstruct the use of mechanical planting equipment.
- The slope restricts the use of equipment for preparing sites for planting and seeding.

LoB—Lonewood silt loam, 2 to 5 percent slopes

Map Unit Composition

Major components
Lonewood and similar soils: 82 to 96 percent

Contrasting inclusions
Lily soils: 1 to 5 percent
Beersheba soils: 2 to 8 percent
Gilpin soils: 1 to 5 percent

Component Descriptions

Lonewood
MLRA: 125 - Cumberland Plateau and Mountains
Landform: Interfluve on plateau
Landform position (two-dimensional): Summit
Slope shape (down, across): Convex, convex
Parent material: Silty mantle over fine-loamy residuum weathered from interbedded sedimentary rock
Slope range: 2 to 5 percent
Surface fragments: None
Depth to restrictive feature: 40 to 72 inches to paralithic bedrock; 40 to 72 inches to lithic bedrock
Drainage class: Well drained
Slowest permeability: Moderate (about 0.60 in/hr)
Available water capacity to 60 inches: High (about 9.4 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None

Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: Low
Land capability class (non-irrigated): 2e
Hydric soil: No

Typical profile:
H1—0 to 20 inches; silt loam
H2—20 to 28 inches; silty clay loam
H3—28 to 55 inches; clay loam
H4—55 to 60 inches; weathered bedrock
H5—60 to 65 inches; unweathered bedrock

Use and Management Considerations

Cropland
- All areas of this map unit are prime farmland.
- Grassed waterways can be used in some areas to slow and direct the movement of water and minimize erosion.
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and help to minimize soil loss by erosion.
- Controlling traffic can minimize soil compaction.
- Maintaining or increasing the content of organic matter in the soil helps to prevent crusting, improves tilth, and increases the rate of water infiltration.

Pasture and hayland
- Erosion control is needed when pastures are renovated.

Woodland
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.

LoC—Lonewood silt loam, 5 to 12 percent slopes

Map Unit Composition

Major components
Lonewood and similar soils: 80 to 95 percent

Contrasting inclusions
Gilpin soils: 2 to 8 percent
Lily soils: 1 to 4 percent
Beersheba soils: 1 to 4 percent
Ramsey soils: 1 to 4 percent

Component Descriptions

Lonewood
MLRA: 125 - Cumberland Plateau and Mountains
Landform: Hillslope on plateau
Landform position (two-dimensional): Backslope
Slope shape (down, across): Convex, convex

Parent material: Silty mantle over fine-loamy residuum weathered from interbedded sedimentary rock
Slope range: 5 to 12 percent
Surface fragments: None
Depth to restrictive feature: 40 to 72 inches to paralithic bedrock; 40 to 72 inches to lithic bedrock
Drainage class: Well drained
Slowest permeability: Moderate (about 0.60 in/hr)
Available water capacity to 60 inches: High (about 9.4 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: Medium
Land capability class (non-irrigated): 3e
Hydric soil: No

Typical profile:
H1—0 to 20 inches; silt loam
H2—20 to 28 inches; silty clay loam
H3—28 to 55 inches; clay loam
H4—55 to 60 inches; weathered bedrock
H5—60 to 65 inches; unweathered bedrock

Use and Management Considerations

Cropland
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and help to minimize soil loss by erosion.
- Controlling traffic can minimize soil compaction.
- Maintaining or increasing the content of organic matter in the soil helps to prevent crusting, improves tilth, and increases the rate of water infiltration.

Pasture and hayland
- Avoiding overgrazing can reduce the hazard of erosion.
- Maintaining healthy plants and a vegetative cover can reduce the hazard of erosion.
- Erosion control is needed when pastures are renovated.

Woodland
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.
- The slope may restrict the use of some mechanical planting equipment.

LP—Limestone quarry

Map Unit Composition

Major components
Limestone quarry: 100 percent

Component Descriptions

Limestone quarry
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Limestone quarry

Me—Melvin silt loam, frequently flooded

Map Unit Composition

Major components
Melvin and similar soils: 90 to 98 percent

Contrasting inclusions
Shady soils: 2 to 10 percent

Component Descriptions

Melvin
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Flood plain in valley
Slope shape (down, across): Concave, concave
Parent material: Fine-silty alluvium derived from interbedded sedimentary rock
Slope range: 0 to 2 percent
Surface fragments: None
Depth to restrictive feature: Greater than 80 inches
Drainage class: Poorly drained
Slowest permeability: Moderate (about 0.60 in/hr)
Available water capacity to 60 inches: Very high (about 12.5 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: Frequent
Ponding hazard: None
Seasonal water saturation (depth, kind): About 0 to 12 inches, apparent water table
Runoff class: Negligible
Land capability class (non-irrigated): 5w
Hydric soil: Yes

Typical profile:
H1—0 to 8 inches; silt loam
H2—8 to 52 inches; silt loam
H3—52 to 80 inches; silt loam

Use and Management Considerations

Cropland
- This soil is generally not suited to cropland.
- Crops are commonly not grown because of frequent flooding.

Pasture and hayland
- Forage production can be improved by seeding grass-legume mixtures that are tolerant of flooding.
- Sediment left on forage plants after a flood event may reduce palatability and forage intake by the grazing animal.
- Excess water should be removed, or grass or legume species that are adapted to wet soil conditions should be planted.
- Restricting grazing during wet periods can minimize compaction.

Woodland
- A seasonal high water table can inhibit the growth of some species of seedlings by reducing root respiration.
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- Flooding may result in damage to haul roads and increased maintenance costs.
- Soil wetness may limit the use of log trucks.
- Flooding restricts the safe use of roads by log trucks.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.

MnC—Minvale gravelly silt loam, 5 to 12 percent slopes

Map Unit Composition

Major components
Minvale and similar soils: 90 to 98 percent

Contrasting inclusions
Tasso soils: 2 to 10 percent

Component Descriptions

Minvale
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Ridge on upland
Landform position (two-dimensional): Footslope
Slope shape (down, across): Concave, concave
Parent material: Fine-loamy colluvium derived from cherty limestone
Slope range: 5 to 12 percent
Surface fragments: None
Depth to restrictive feature: Greater than 80 inches
Drainage class: Well drained
Slowest permeability: Moderate (about 0.60 in/hr)
Available water capacity to 60 inches: Moderate (about 7.9 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: Medium
Land capability class (non-irrigated): 3e
Hydric soil: No

Typical profile:
H1—0 to 5 inches; gravelly silt loam
H2—5 to 48 inches; gravelly silty clay loam
H3—48 to 62 inches; gravelly clay

Use and Management Considerations

Cropland
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and help to minimize soil loss by erosion.

Pasture and hayland
- Avoiding overgrazing can reduce the hazard of erosion.
- Maintaining healthy plants and a vegetative cover can reduce the hazard of erosion.
- Erosion control is needed when pastures are renovated.

Woodland
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- Rock fragments obstruct the use of mechanical planting equipment.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- Stones restrict the use of equipment during site preparation for planting or seeding.

MoC—Montevallo channery silt loam, 5 to 12 percent slopes

Map Unit Composition

Major components
Montevallo and similar soils: 91 to 97 percent

Contrasting inclusions
Armuchee soils: 2 to 5 percent
Salacoa soils: 1 to 4 percent

Component Descriptions

Montevallo
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Ridge on upland
Landform position (two-dimensional): Backslope
Slope shape (down, across): Convex, convex
Parent material: Loamy-skeletal residuum weathered from acid shale
Slope range: 5 to 12 percent
Surface fragments: None
Depth to restrictive feature: 10 to 20 inches to paralithic bedrock
Drainage class: Well drained
Slowest permeability: Slow (about 0.06 in/hr)
Available water capacity to 60 inches: Very low (about 1.2 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: Low
Land capability class (non-irrigated): 4e
Hydric soil: No

Typical profile:
H1—0 to 2 inches; channery silt loam
H2—2 to 15 inches; extremely channery silt loam
H3—15 to 19 inches; weathered bedrock

Use and Management Considerations

Cropland
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and help to minimize soil loss by erosion.
- Incorporating crop residue or other organic matter into the surface layer increases the capacity of the soil to hold and retain moisture. Plants may suffer from moisture stress because of the limited available water capacity.

Pasture and hayland
- Avoiding overgrazing can reduce the hazard of erosion.
- Maintaining healthy plants and a vegetative cover can reduce the hazard of erosion.
- Erosion control is needed when pastures are renovated.
- Plants may suffer from moisture stress during the drier summer months because of the limited available water capacity.
- Using a system of seedbed preparation that minimizes soil disturbance when pastures are renovated conserves soil moisture.
- This soil provides poor summer pasture.

Woodland
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- Rock fragments obstruct the use of mechanical planting equipment.
- Because of the content of rock fragments, the use of mechanical planting equipment is not practical.
- Stones restrict the use of equipment during site preparation for planting or seeding.

MoD—Montevallo channery silt loam, 12 to 20 percent slopes

Map Unit Composition

Major components
Montevallo and similar soils: 90 to 98 percent

Contrasting inclusions
Salacoa soils: 1 to 5 percent
Armuchee soils: 1 to 5 percent

Component Descriptions

Montevallo
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Ridge on upland
Landform position (two-dimensional): Backslope
Slope shape (down, across): Convex, convex
Parent material: Loamy-skeletal residuum weathered from acid shale
Slope range: 12 to 20 percent

Surface fragments: None
Depth to restrictive feature: 10 to 20 inches to paralithic bedrock
Drainage class: Well drained
Slowest permeability: Slow (about 0.06 in/hr)
Available water capacity to 60 inches: Very low (about 1.2 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: Low
Land capability class (non-irrigated): 6e
Hydric soil: No

Typical profile:
H1—0 to 2 inches; channery silt loam
H2—2 to 15 inches; extremely channery silt loam
H3—15 to 19 inches; weathered bedrock

Use and Management Considerations

Cropland
- This soil is generally not suited to cropland.

Pasture and hayland
- Avoiding overgrazing can reduce the hazard of erosion.
- Maintaining healthy plants and a vegetative cover can reduce the hazard of erosion.
- Erosion control is needed when pastures are renovated.
- Plants may suffer from moisture stress during the drier summer months because of the limited available water capacity.
- Using a system of seedbed preparation that minimizes soil disturbance when pastures are renovated conserves soil moisture.
- This soil provides poor summer pasture.

Woodland
- If the soil is disturbed, the slope increases the hazard of erosion.
- The slope increases excavation costs, poses safety hazards, and creates a potential for erosion during the construction of haul roads and log landings.
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- Rock fragments obstruct the use of mechanical planting equipment.
- Because of the content of rock fragments, the use of mechanical planting equipment is not practical.
- The slope restricts the use of equipment for preparing sites for planting and seeding.
- Stones restrict the use of equipment during site preparation for planting or seeding.

MoE—Montevallo channery silt loam, 20 to 35 percent slopes

Map Unit Composition

Major components
Montevallo and similar soils: 90 to 98 percent

Contrasting inclusions
Armuchee soils: 2 to 10 percent

Component Descriptions

Montevallo
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Ridge on upland
Landform position (two-dimensional): Backslope
Slope shape (down, across): Convex, convex
Parent material: Loamy-skeletal residuum weathered from acid shale
Slope range: 20 to 35 percent
Surface fragments: None
Depth to restrictive feature: 10 to 20 inches to paralithic bedrock
Drainage class: Well drained
Slowest permeability: Slow (about 0.06 in/hr)
Available water capacity to 60 inches: Very low (about 1.2 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: Low
Land capability class (non-irrigated): 7e
Hydric soil: No

Typical profile:
H1—0 to 2 inches; channery silt loam
H2—2 to 15 inches; extremely channery silt loam
H3—15 to 19 inches; weathered bedrock

Use and Management Considerations

Cropland
- This soil is generally not suited to cropland.
- The slope and the erosion hazard generally make cultivation impractical.

Pasture and hayland
- This soil is generally not recommended for pasture.

Woodland
- If the soil is disturbed, the slope increases the hazard of erosion.
- The slope increases excavation costs, poses safety hazards, and creates a potential for erosion during the construction of haul roads and log landings.
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and of harvesting and mechanical planting equipment.
- Because of the slope, the use of mechanical planting equipment is not practical.
- Rock fragments obstruct the use of mechanical planting equipment.
- Because of the content of rock fragments, the use of mechanical planting equipment is not practical.
- The slope restricts the use of equipment for preparing sites for planting and seeding.
- Stones restrict the use of equipment during site preparation for planting or seeding.

Pp—Pope-Philo complex, frequently flooded

Map Unit Composition

Major components
Pope and similar soils: 40 to 55 percent
Philo and similar soils: 41 to 50 percent

Contrasting inclusions
Atkins soils: 4 to 10 percent

Component Descriptions

Pope
MLRA: 125 - Cumberland Plateau and Mountains
Landform: Flood plain in valley
Slope shape (down, across): Linear, linear
Parent material: Coarse-loamy alluvium derived from sandstone and shale
Slope range: 0 to 3 percent
Surface fragments: None
Depth to restrictive feature: Greater than 80 inches
Drainage class: Well drained
Slowest permeability: Moderate (about 0.60 in/hr)
Available water capacity to 60 inches: Moderate (about 8.8 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: Frequent
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: Negligible
Land capability class (non-irrigated): 2w
Hydric soil: No

Typical profile:
H1—0 to 8 inches; loam
H2—8 to 43 inches; loam
H3—43 to 80 inches; very gravelly sandy loam

Philo
MLRA: 125 - Cumberland Plateau and Mountains
Landform: Flood plain in valley
Slope shape (down, across): Linear, concave
Parent material: Coarse-loamy alluvium derived from interbedded sedimentary rock
Slope range: 0 to 3 percent
Surface fragments: None
Depth to restrictive feature: Greater than 80 inches
Drainage class: Moderately well drained
Slowest permeability: Moderate (about 0.60 in/hr)
Available water capacity to 60 inches: High (about 9.6 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: Frequent
Ponding hazard: None
Seasonal water saturation (depth, kind): About 18 to 36 inches, apparent water table
Runoff class: Negligible
Land capability class (non-irrigated): 2w
Hydric soil: No

Typical profile:
H1—0 to 36 inches; loam
H2—36 to 48 inches; loam
H3—48 to 80 inches; gravelly sandy loam

Use and Management Considerations

Cropland
- All areas of this map unit are prime farmland.
- Careful selection and application of chemicals and fertilizers help to minimize the possibility of ground-water contamination.
- Crops are commonly not grown because of frequent flooding.
- Measures that protect the soil from scouring and minimize the loss of crop residue by floodwaters are needed.

Pasture and hayland
- Forage production can be improved by seeding grass-legume mixtures that are tolerant of flooding.
- Sediment left on forage plants after a flood event may reduce palatability and forage intake by the grazing animal.

Woodland
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- Flooding may result in damage to haul roads and increased maintenance costs.
- Flooding restricts the safe use of roads by log trucks.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.

RaD—Ramsey-Rock outcrop complex, 12 to 20 percent slopes

Map Unit Composition

Major components
Ramsey and similar soils: 57 to 85 percent
Rock outcrop: 15 to 35 percent

Contrasting inclusions
Lily soils: 0 to 8 percent

Component Descriptions

Ramsey
MLRA: 125 - Cumberland Plateau and Mountains
Landform: Hillslope on upland
Slope shape (down, across): Convex, convex
Parent material: Loamy residuum weathered from sandstone
Slope range: 12 to 20 percent
Surface fragments: None
Depth to restrictive feature: 7 to 20 inches to lithic bedrock
Drainage class: Somewhat excessively drained
Slowest permeability: Very slow to impermeable (about 0.00 in/hr)

Available water capacity to 60 inches: Very low (about 1.8 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: High
Land capability class (non-irrigated): 6s
Hydric soil: No

Typical profile:
H1—0 to 4 inches; loam
H2—4 to 10 inches; fine sandy loam
H3—10 to 16 inches; channery sandy loam
H4—16 to 18 inches; unweathered bedrock

Rock outcrop
MLRA: 125 - Cumberland Plateau and Mountains
Parent material: Sandstone
Slope range: 12 to 20 percent
Slowest permeability: Slow (about 0.06 in/hr)
Runoff class: Very high
Land capability class (non-irrigated): Nonspecified

Use and Management Considerations

Cropland
• This Ramsey soil is generally not suited to cropland.

Pasture and hayland
• Avoiding overgrazing can reduce the hazard of erosion.
• Maintaining healthy plants and a vegetative cover can reduce the hazard of erosion.
• Erosion control is needed when pastures are renovated.
• Plants may suffer from moisture stress during the drier summer months because of the limited available water capacity.
• Using a system of seedbed preparation that minimizes soil disturbance when pastures are renovated conserves soil moisture.
• This soil provides poor summer pasture.

Woodland
• If the soil is disturbed, the slope increases the hazard of erosion.
• The slope increases excavation costs, poses safety hazards, and creates a potential for erosion during the construction of haul roads and log landings.
• The limited available water capacity inhibits root development and increases the seedling mortality rate.
• The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
• The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
• Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.
• The slope may restrict the use of some mechanical planting equipment.
• Rock fragments obstruct the use of mechanical planting equipment.
• The slope restricts the use of equipment for preparing sites for planting and seeding.

RaF—Ramsey-Rock outcrop complex, 20 to 50 percent slopes

Map Unit Composition

Major components
Ramsey and similar soils: 65 to 85 percent
Rock outcrop: 15 to 35 percent

Component Descriptions

Ramsey
MLRA: 125 - Cumberland Plateau and Mountains
Landform: Hillslope on upland
Slope shape (down, across): Linear, convex
Parent material: Loamy residuum weathered from sandstone
Slope range: 20 to 50 percent
Surface fragments: None
Depth to restrictive feature: 7 to 20 inches to lithic bedrock
Drainage class: Somewhat excessively drained
Slowest permeability: Very slow to impermeable (about 0.00 in/hr)
Available water capacity to 60 inches: Very low (about 1.8 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: High
Land capability class (non-irrigated): 7s
Hydric soil: No

Typical profile:
H1—0 to 4 inches; loam
H2—4 to 10 inches; fine sandy loam
H3—10 to 16 inches; channery sandy loam
H4—16 to 18 inches; unweathered bedrock

Rock outcrop
MLRA: 125 - Cumberland Plateau and Mountains
Parent material: Sandstone
Slope range: 20 to 50 percent
Runoff class: Very high
Land capability class (non-irrigated): Nonspecified

Use and Management Considerations

Cropland
- This Ramsey soil is generally not suited to cropland.
- The slope and the erosion hazard generally make cultivation impractical.

Pasture and hayland
- This soil is generally not recommended for pasture.
- Steep slopes generally make establishing pastures impractical.

Woodland
- If the soil is disturbed, the slope increases the hazard of erosion.
- The slope increases excavation costs, poses safety hazards, and creates a potential for erosion during the construction of haul roads and log landings.

- The limited available water capacity inhibits root development and increases the seedling mortality rate.
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and of harvesting and mechanical planting equipment.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.
- Because of the slope, the use of equipment to prepare sites for planting and seeding is not practical.
- Because of the slope, the use of mechanical planting equipment is not practical.
- Rock fragments obstruct the use of mechanical planting equipment.

Sd—Shady loam, occasionally flooded

Map Unit Composition

Major components
Shady and similar soils: 95 to 100 percent

Contrasting inclusions
Whitwell soils: 0 to 5 percent

Component Descriptions

Shady
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Stream terrace in valley
Slope shape (down, across): Linear, linear
Parent material: Fine-loamy alluvium derived from limestone, sandstone, and shale
Slope range: 0 to 3 percent
Surface fragments: None
Depth to restrictive feature: Greater than 80 inches
Drainage class: Well drained
Slowest permeability: Moderate (about 0.60 in/hr)
Available water capacity to 60 inches: Moderate (about 7.8 inches)
Shrink-swell potential: Low (about 1.8 LEP)
Flooding hazard: Occasional
Ponding hazard: None
Seasonal water saturation (depth, kind): About 60 to 72 inches, apparent water table
Runoff class: Very low
Land capability class (non-irrigated): 2e
Hydric soil: No

Typical profile:
H1—0 to 6 inches; loam
H2—6 to 26 inches; clay loam
H3—26 to 38 inches; loam
H4—38 to 48 inches; gravelly fine sandy loam

Use and Management Considerations

Cropland
- All areas of this map unit are prime farmland

- Careful selection and application of chemicals and fertilizers help to minimize the possibility of ground-water contamination.
- Measures that protect the soil from scouring and minimize the loss of crop residue by floodwaters are needed.
- Small grain crops may be damaged by flooding in winter and spring.

Pasture and hayland
- Forage production can be improved by seeding grass-legume mixtures that are tolerant of flooding.
- Sediment left on forage plants after a flood event may reduce palatability and forage intake by the grazing animal.

Woodland
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- Flooding may result in damage to haul roads and increased maintenance costs.
- Flooding restricts the safe use of roads by log trucks.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

SfB—Shady-Swafford-Urban land complex, 2 to 5 percent slopes

Map Unit Composition

Major components
Shady and similar soils: 25 to 55 percent
Swafford and similar soils: 30 to 45 percent
Urban land: 15 to 30 percent

Component Descriptions

Shady
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Stream terrace in valley
Slope shape (down, across): Linear, linear
Parent material: Fine-loamy alluvium derived from limestone, sandstone, and shale
Slope range: 2 to 5 percent
Surface fragments: None
Depth to restrictive feature: Greater than 80 inches
Drainage class: Well drained
Slowest permeability: Moderate (about 0.60 in/hr)
Available water capacity to 60 inches: Moderate (about 7.8 inches)
Shrink-swell potential: Low (about 1.8 LEP)
Flooding hazard: None
Ponding hazard: None
Seasonal water saturation (depth, kind): About 60 to 72 inches, apparent water table
Runoff class: Very low
Land capability class (non-irrigated): Unspecified
Hydric soil: No

Typical profile:
H1—0 to 6 inches; loam
H2—6 to 26 inches; clay loam
H3—26 to 38 inches; loam
H4—38 to 48 inches; gravelly fine sandy loam

Swafford
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Low stream terrace in valley
Slope shape (down, across): Concave, linear
Parent material: Fine-loamy alluvium derived from limestone and sandstone
Slope range: 2 to 5 percent
Surface fragments: None
Depth to restrictive feature: 18 to 36 inches to fragipan
Drainage class: Moderately well drained
Slowest permeability: Moderate (about 0.60 in/hr)
Available water capacity to 60 inches: High (about 9.7 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Seasonal water saturation (depth, kind): About 24 to 36 inches, apparent water table
Runoff class: Medium
Land capability class (non-irrigated): Unspecified
Hydric soil: No

Typical profile:
H1—0 to 12 inches; loam
H2—12 to 26 inches; clay loam
H3—26 to 40 inches; clay loam
H4—40 to 80 inches; clay loam

Urban land
MLRA: 128 - Southern Appalachian Ridges and Valleys
Parent material: Areas where the surface is covered by roads, streets, parking lots, commercial buildings, houses, and other types of impervious ground cover (in places natural drainage has been altered by a system of ditches and storm drains)
Slope range: 2 to 5 percent

ShD—Shelocta silt loam, 12 to 20 percent slopes

Map Unit Composition

Major components
Shelocta and similar soils: 95 to 100 percent

Contrasting inclusions
Jefferson soils: 0 to 5 percent

Component Descriptions

Shelocta
MLRA: 125 - Cumberland Plateau and Mountains
Landform: Mountain slope on mountains
Landform position (two-dimensional): Footslope
Slope shape (down, across): Concave, concave
Parent material: Fine-loamy colluvium derived from sandstone and shale
Slope range: 12 to 20 percent

Surface fragments: None
Depth to restrictive feature: Greater than 80 inches
Drainage class: Well drained
Slowest permeability: Moderate (about 0.60 in/hr)
Available water capacity to 60 inches: Moderate (about 8.2 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: High
Land capability class (non-irrigated): 4e
Hydric soil: No

Typical profile:
H1—0 to 10 inches; silt loam
H2—10 to 21 inches; silty clay loam
H3—21 to 65 inches; channery silty clay loam
H4—65 to 75 inches; weathered bedrock

Use and Management Considerations

Cropland
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and help to minimize soil loss by erosion.
- Controlling traffic can minimize soil compaction.
- Maintaining or increasing the content of organic matter in the soil helps to prevent crusting, improves tilth, and increases the rate of water infiltration.

Pasture and hayland
- Avoiding overgrazing can reduce the hazard of erosion.
- Maintaining healthy plants and a vegetative cover can reduce the hazard of erosion.
- Erosion control is needed when pastures are renovated.

Woodland
- If the soil is disturbed, the slope increases the hazard of erosion.
- The slope increases excavation costs, poses safety hazards, and creates a potential for erosion during the construction of haul roads and log landings.
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- The slope restricts the use of equipment for preparing sites for planting and seeding.

SwB—Swafford loam, 2 to 5 percent slopes

Map Unit Composition

Major components
Swafford and similar soils: 90 to 98 percent

Figure 3.—A view reflecting one of the few areas of wide floodplains along Indian Creek near Oliver Springs. Swafford loam, 2 to 5 percent slopes, is on low stream terraces in the foreground. Hamblen silt loam, occasionally flooded, lies on the floodplain along Indian Creek in the center of the photograph. Montevallo channery silt loam, 20 to 35 percent slopes, is on the wooded ridge in the background.

Contrasting inclusions
Apison soils: 0 to 3 percent
Collegedale soils: 0 to 2 percent
Shady soils: 0 to 5 percent

Component Descriptions

Swafford
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Low stream terrace in valley (fig. 3)
Slope shape (down, across): Concave, linear
Parent material: Fine-loamy alluvium derived from limestone and sandstone
Slope range: 2 to 5 percent
Surface fragments: None
Depth to restrictive feature: 18 to 36 inches to fragipan
Drainage class: Moderately well drained
Slowest permeability: Moderate (about 0.60 in/hr)
Available water capacity to 60 inches: High (about 9.7 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Seasonal water saturation (depth, kind): About 24 to 36 inches, apparent water table
Runoff class: Medium

Land capability class (non-irrigated): 2w
Hydric soil: No

Typical profile:
H1—0 to 12 inches; loam
H2—12 to 26 inches; clay loam
H3—26 to 40 inches; clay loam
H4—40 to 80 inches; clay loam

Use and Management Considerations

Cropland
- All areas of this map unit are prime farmland.
- Grassed waterways can be used in some areas to slow and direct the movement of water and minimize erosion.
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and help to minimize soil loss by erosion.
- Incorporating crop residue or other organic matter into the surface layer increases the capacity of the soil to hold and retain moisture. Plants may suffer from moisture stress because of the limited available water capacity.
- The rooting depth of crops is restricted by dense soil material.

Pasture and hayland
- Erosion control is needed when pastures are renovated.
- Plants may suffer from moisture stress during the drier summer months because of the limited available water capacity.
- Using a system of seedbed preparation that minimizes soil disturbance when pastures are renovated conserves soil moisture.
- This soil provides poor summer pasture.
- The rooting depth of plants may be restricted by a dense soil layer.

Woodland
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.

TaB—Tasso loam, 2 to 5 percent slopes

Map Unit Composition

Major components
Tasso and similar soils: 85 to 98 percent

Contrasting inclusions
Rockdell soils: 2 to 10 percent

Component Descriptions

Tasso
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Hillslope on upland

Landform position (two-dimensional): Footslope
Slope shape (down, across): Linear, concave
Parent material: Fine-loamy colluvium and/or alluvium over residuum weathered from limestone and shale or old alluvium
Slope range: 2 to 5 percent
Surface fragments: None
Depth to restrictive feature: 18 to 36 inches to fragipan
Drainage class: Well drained
Slowest permeability: Moderately slow (about 0.20 in/hr)
Available water capacity to 60 inches: High (about 9.4 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: Medium
Land capability class (non-irrigated): 2e
Hydric soil: No

Typical profile:
H1—0 to 9 inches; loam
H2—9 to 30 inches; clay loam
H3—30 to 42 inches; gravelly clay
H4—42 to 62 inches; clay

Use and Management Considerations

Cropland

- All areas of this map unit are prime farmland.
- Grassed waterways can be used in some areas to slow and direct the movement of water and minimize erosion.
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and help to minimize soil loss by erosion.
- Incorporating crop residue or other organic matter into the surface layer increases the capacity of the soil to hold and retain moisture. Plants may suffer from moisture stress because of the limited available water capacity.
- The rooting depth of crops is restricted by dense soil material.

Pasture and hayland

- Erosion control is needed when pastures are renovated.
- Plants may suffer from moisture stress during the drier summer months because of the limited available water capacity.
- Using a system of seedbed preparation that minimizes soil disturbance when pastures are renovated conserves soil moisture.
- This soil provides poor summer pasture.
- The rooting depth of plants may be restricted by a dense soil layer.

Woodland

- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.

TaC—Tasso loam, 5 to 12 percent slopes

Map Unit Composition

Major components
Tasso and similar soils: 85 to 95 percent

Contrasting inclusions
Hamblen soils: 3 to 5 percent
Rockdell soils: 2 to 5 percent

Component Descriptions

Tasso
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Hillslope on upland
Landform position (two-dimensional): Footslope
Slope shape (down, across): Linear, concave
Parent material: Fine-loamy colluvium and/or alluvium over residuum weathered from limestone and shale or old alluvium
Slope range: 5 to 12 percent
Surface fragments: None
Depth to restrictive feature: 18 to 36 inches to fragipan
Drainage class: Well drained
Slowest permeability: Moderately slow (about 0.20 in/hr)
Available water capacity to 60 inches: High (about 9.4 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: High
Land capability class (non-irrigated): 3e
Hydric soil: No

Typical profile:
H1—0 to 9 inches; loam
H2—9 to 30 inches; clay loam
H3—30 to 42 inches; gravelly clay
H4—42 to 62 inches; clay

Use and Management Considerations

Cropland
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and help to minimize soil loss by erosion.
- Incorporating crop residue or other organic matter into the surface layer increases the capacity of the soil to hold and retain moisture. Plants may suffer from moisture stress because of the limited available water capacity.
- The rooting depth of crops is restricted by dense soil material.

Pasture and hayland
- Avoiding overgrazing can reduce the hazard of erosion.
- Maintaining healthy plants and a vegetative cover can reduce the hazard of erosion.
- Erosion control is needed when pastures are renovated.
- Plants may suffer from moisture stress during the drier summer months because of the limited available water capacity.

- Using a system of seedbed preparation that minimizes soil disturbance when pastures are renovated conserves soil moisture.
- This soil provides poor summer pasture.
- The rooting depth of plants may be restricted by a dense soil layer.

Woodland
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.
- The slope may restrict the use of some mechanical planting equipment.

TeB2—Townley-Coile complex, 2 to 5 percent slopes, eroded

Map Unit Composition

Major components
Townley and similar soils: 55 to 84 percent
Coile and similar soils: 16 to 35 percent

Contrasting inclusions
Corryton soils: 5 to 10 percent

Component Descriptions

Townley
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Ridge on upland
Landform position (two-dimensional): Summit
Slope shape (down, across): Convex, convex
Parent material: Clayey residuum weathered from shale
Slope range: 2 to 5 percent
Surface fragments: None
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Drainage class: Well drained
Slowest permeability: Very slow to impermeable (about 0.00 in/hr)
Available water capacity to 60 inches: Low (about 4.1 inches)
Shrink-swell potential: Moderate (about 4.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: Medium
Land capability class (non-irrigated): 4e
Hydric soil: No

Typical profile:
H1—0 to 5 inches; silt loam
H2—5 to 24 inches; clay
H3—24 to 28 inches; silty clay loam
H4—28 to 44 inches; weathered bedrock

Coile
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Ridge on upland
Landform position (two-dimensional): Summit
Slope shape (down, across): Convex, convex
Parent material: Loamy-skeletal residuum weathered from acid shale
Slope range: 2 to 5 percent
Surface fragments: None
Depth to restrictive feature: 9 to 24 inches to paralithic bedrock
Drainage class: Well drained
Slowest permeability: Very slow to impermeable (about 0.00 in/hr)
Available water capacity to 60 inches: Low (about 4.8 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: Medium
Land capability class (non-irrigated): 4e
Hydric soil: No

Typical profile:
H1—0 to 3 inches; silt loam
H2—3 to 10 inches; very channery silt loam
H3—10 to 18 inches; channery clay
H4—18 to 24 inches; weathered bedrock

Use and Management Considerations

Cropland
- Grassed waterways can be used in some areas to slow and direct the movement of water and minimize erosion.
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and help to minimize soil loss by erosion.
- Erosion has removed part of the surface soil, and the remaining surface soil is less productive and more difficult to manage.
- Controlling traffic can minimize soil compaction.
- The rooting depth of crops may be restricted by the high clay content.
- Maintaining or increasing the content of organic matter in the soil helps to prevent crusting, improves tilth, and increases the rate of water infiltration.

Pasture and hayland
- Erosion control is needed when pastures are renovated.

Woodland
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- Because of the content of clay, the soil becomes sticky when wet. The stickiness increases the cost of constructing haul roads and log landings.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.
- Because of the content of rock fragments, the use of mechanical planting equipment is not practical.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

- Stones restrict the use of equipment during site preparation for planting or seeding.
- Because of the stickiness of the soil, the use of equipment for site preparation is restricted to the drier periods.

TeC—Townley silt loam, 5 to 12 percent slopes

Map Unit Composition

Major components
Townley and similar soils: 92 to 98 percent

Contrasting inclusions
Montevallo soils: 2 to 8 percent

Component Descriptions

Townley
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Ridge on upland
Landform position (two-dimensional): Summit
Slope shape (down, across): Convex, convex
Parent material: Clayey residuum weathered from shale
Slope range: 5 to 12 percent
Surface fragments: None
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Drainage class: Well drained
Slowest permeability: Impermeable (about 0.00 in/hr)
Available water capacity to 60 inches: Low (about 5.0 inches)
Shrink-swell potential: Moderate (about 4.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: Very high
Land capability class (non-irrigated): 4e
Hydric soil: No

Typical profile:
H1—0 to 8 inches; silt loam
H2—8 to 20 inches; silty clay loam
H3—20 to 30 inches; silty clay
H4—30 to 36 inches; channery silty clay loam
H5—36 to 46 inches; weathered bedrock

Use and Management Considerations

Cropland
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and help to minimize soil loss by erosion.
- Incorporating crop residue or other organic matter into the surface layer increases the capacity of the soil to hold and retain moisture. Plants may suffer from moisture stress because of the limited available water capacity.
- Controlling traffic can minimize soil compaction.
- The rooting depth of crops may be restricted by the high clay content.
- Maintaining or increasing the content of organic matter in the soil helps to prevent crusting, improves tilth, and increases the rate of water infiltration.

Pasture and hayland

- Avoiding overgrazing can reduce the hazard of erosion.
- Maintaining healthy plants and a vegetative cover can reduce the hazard of erosion.
- Erosion control is needed when pastures are renovated.
- Plants may suffer from moisture stress during the drier summer months because of the limited available water capacity.
- Using a system of seedbed preparation that minimizes soil disturbance when pastures are renovated conserves soil moisture.
- This soil provides poor summer pasture.

Woodland

- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

TeD—Townley silt loam, 12 to 20 percent slopes

Map Unit Composition

Major components
Townley and similar soils: 88 to 95 percent

Contrasting inclusions
Montevallo soils: 5 to 12 percent

Component Descriptions

Townley
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Ridge on upland
Landform position (two-dimensional): Backslope
Slope shape (down, across): Linear, convex
Parent material: Clayey residuum weathered from shale
Slope range: 12 to 20 percent
Surface fragments: None
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Drainage class: Well drained
Slowest permeability: Impermeable (about 0.00 in/hr)
Available water capacity to 60 inches: Low (about 5.0 inches)
Shrink-swell potential: Moderate (about 4.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: Very high
Land capability class (non-irrigated): 6e
Hydric soil: No

Typical profile:

H1—0 to 8 inches; silt loam
H2—8 to 20 inches; silty clay loam
H3—20 to 30 inches; silty clay
H4—30 to 36 inches; channery silty clay loam
H5—36 to 46 inches; weathered bedrock

Use and Management Considerations

Cropland
- This soil is generally not suited to cropland.

Pasture and hayland
- Avoiding overgrazing can reduce the hazard of erosion.
- Maintaining healthy plants and a vegetative cover can reduce the hazard of erosion.
- Erosion control is needed when pastures are renovated.
- Plants may suffer from moisture stress during the drier summer months because of the limited available water capacity.
- Using a system of seedbed preparation that minimizes soil disturbance when pastures are renovated conserves soil moisture.
- This soil provides poor summer pasture.

Woodland
- If the soil is disturbed, the slope increases the hazard of erosion.
- The slope increases excavation costs, poses safety hazards, and creates a potential for erosion during the construction of haul roads and log landings.
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- The slope restricts the use of equipment for preparing sites for planting and seeding.

TeE—Townley silt loam, 20 to 35 percent slopes

Map Unit Composition

Major components
Townley and similar soils: 90 to 97 percent

Contrasting inclusions
Montevallo soils: 3 to 10 percent

Component Descriptions

Townley
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Ridge on upland
Landform position (two-dimensional): Backslope
Slope shape (down, across): Linear, convex
Parent material: Clayey residuum weathered from shale

Slope range: 20 to 35 percent
Surface fragments: None
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Drainage class: Well drained
Slowest permeability: Impermeable (about 0.00 in/hr)
Available water capacity to 60 inches: Low (about 5.0 inches)
Shrink-swell potential: Moderate (about 4.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: Very high
Land capability class (non-irrigated): 7e
Hydric soil: No

Typical profile:
H1—0 to 8 inches; silt loam
H2—8 to 20 inches; silty clay loam
H3—20 to 30 inches; silty clay
H4—30 to 36 inches; channery silty clay loam
H5—36 to 46 inches; weathered bedrock

Use and Management Considerations

Cropland
- This soil is generally not suited to cropland.
- The slope and the erosion hazard generally make cultivation impractical.

Pasture and hayland
- This soil is generally not recommended for pasture.

Woodland
- If the soil is disturbed, the slope increases the hazard of erosion.
- The slope increases excavation costs, poses safety hazards, and creates a potential for erosion during the construction of haul roads and log landings.
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and of harvesting and mechanical planting equipment.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.
- Because of the slope, the use of mechanical planting equipment is not practical.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- The slope restricts the use of equipment for preparing sites for planting and seeding.

TuD—Townley-Armuchee-Urban land complex, 5 to 20 percent slopes

Map Unit Composition

Major components
Townley and similar soils: 25 to 60 percent
Armuchee and similar soils: 25 to 45 percent
Urban land: 15 to 30 percent

Component Descriptions

Townley

MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Ridge on upland
Landform position (two-dimensional): Backslope
Slope shape (down, across): Linear, convex
Parent material: Clayey residuum weathered from shale
Slope range: 5 to 20 percent
Surface fragments: None
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Drainage class: Well drained
Slowest permeability: Impermeable (about 0.00 in/hr)
Available water capacity to 60 inches: Low (about 5.0 inches)
Shrink-swell potential: Moderate (about 4.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: Very high
Land capability class (non-irrigated): Unspecified
Hydric soil: No

Typical profile:
H1—0 to 8 inches; silt loam
H2—8 to 20 inches; silty clay loam
H3—20 to 30 inches; silty clay
H4—30 to 36 inches; channery silty clay loam
H5—36 to 46 inches; weathered bedrock

Armuchee

MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Ridge on upland
Landform position (two-dimensional): Backslope
Slope shape (down, across): Linear, convex
Parent material: Clayey residuum weathered from acid shale
Slope range: 5 to 20 percent
Surface fragments: None
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Drainage class: Well drained
Slowest permeability: Very slow to impermeable (about 0.00 in/hr)
Available water capacity to 60 inches: Very low (about 2.5 inches)
Shrink-swell potential: Moderate (about 4.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: High
Land capability class (non-irrigated): Unspecified
Hydric soil: No

Typical profile:
H1—0 to 6 inches; silt loam
H2—6 to 11 inches; channery silty clay loam
H3—11 to 21 inches; very channery silty clay
H4—21 to 40 inches; weathered bedrock

Urban land

MLRA: 128 - Southern Appalachian Ridges and Valleys

Parent material: Areas where the surface is covered by roads, streets, parking lots, commercial buildings, houses, and other types of impervious ground cover (in places natural drainage has been altered by a system of ditches and storm drains)

TuE—Townley-Armuchee-Urban land complex, 20 to 35 percent slopes

Map Unit Composition

Major components
Townley and similar soils: 25 to 60 percent
Armuchee and similar soils: 25 to 45 percent
Urban land: 15 to 30 percent

Component Descriptions

Townley
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Ridge on upland
Landform position (two-dimensional): Backslope
Slope shape (down, across): Linear, convex
Parent material: Clayey residuum weathered from shale
Slope range: 20 to 35 percent
Surface fragments: None
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Drainage class: Well drained
Slowest permeability: Impermeable (about 0.00 in/hr)
Available water capacity to 60 inches: Low (about 5.0 inches)
Shrink-swell potential: Moderate (about 4.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: Very high
Land capability class (non-irrigated): Unspecified
Hydric soil: No

Typical profile:
H1—0 to 8 inches; silt loam
H2—8 to 20 inches; silty clay loam
H3—20 to 30 inches; silty clay
H4—30 to 36 inches; channery silty clay loam
H5—36 to 46 inches; weathered bedrock

Armuchee
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Ridge on upland
Landform position (two-dimensional): Backslope
Slope shape (down, across): Linear, convex
Parent material: Clayey residuum weathered from acid shale
Slope range: 20 to 35 percent
Surface fragments: None
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Drainage class: Well drained
Slowest permeability: Very slow to impermeable (about 0.00 in/hr)
Available water capacity to 60 inches: Very low (about 2.5 inches)

Shrink-swell potential: Moderate (about 4.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: High
Land capability class (non-irrigated): Unspecified
Hydric soil: No

Typical profile:
H1—0 to 6 inches; silt loam
H2—6 to 11 inches; channery silty clay loam
H3—11 to 21 inches; very channery silty clay
H4—21 to 40 inches; weathered bedrock

Urban land
MLRA: 128 - Southern Appalachian Ridges and Valleys
Parent material: Areas where the surface is covered by roads, streets, parking lots, commercial buildings, houses, and other types of impervious ground cover (in places natural drainage has been altered by a system of ditches and storm drains)

UrD—Urban land, 5 to 20 percent slopes

Map Unit Composition

Major components
Urban land: 100 percent

Component Descriptions

Urban land
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Urban land
Parent material: Areas where the surface is covered by roads, streets, parking lots, commercial buildings, houses, and other types of impervious ground cover (in places natural drainage has been altered by a system of ditches and storm drains)
Slope range: 5 to 20 percent
Runoff class: Very high

W—Water

Map Unit Composition

Major components
Water: 100 percent

Component Descriptions

Water
MLRA: 128 - Southern Appalachian Ridges and Valleys

WaB—Waynesboro loam, 2 to 5 percent slopes

Map Unit Composition

Major components
Waynesboro and similar soils: 88 to 95 percent

Contrasting inclusions
Etowah soils: 5 to 12 percent

Component Descriptions

Waynesboro
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Terrace on upland
Landform position (two-dimensional): Summit
Slope shape (down, across): Convex, convex
Parent material: Clayey alluvium derived from interbedded sedimentary rock
Slope range: 2 to 5 percent
Surface fragments: None
Depth to restrictive feature: Greater than 80 inches
Drainage class: Well drained
Slowest permeability: Moderate (about 0.60 in/hr)
Available water capacity to 60 inches: High (about 10.2 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: Medium
Land capability class (non-irrigated): 2e
Hydric soil: No

Typical profile:
H1—0 to 6 inches; loam
H2—6 to 11 inches; loam
H3—11 to 35 inches; clay loam
H4—35 to 80 inches; clay

Use and Management Considerations

Cropland
- All areas of this map unit are prime farmland.
- Grassed waterways can be used in some areas to slow and direct the movement of water and minimize erosion.
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and help to minimize soil loss by erosion.
- The rooting depth of crops may be restricted by the high clay content.

Pasture and hayland
- Erosion control is needed when pastures are renovated.

Woodland
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

Figure 4.—Waynesboro loam, 5 to 12 percent slopes, is in the foreground in pasture. Montevallo channery silt loam, 20 to 35 percent slopes, is on the wooded ridges in the background.

WaC—Waynesboro loam, 5 to 12 percent slopes

Map Unit Composition

Major components
Waynesboro and similar soils: 88 to 97 percent

Contrasting inclusions
Etowah soils: 3 to 12 percent

Component Descriptions

Waynesboro
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Terrace on upland (fig. 4)
Landform position (two-dimensional): Summit
Slope shape (down, across): Convex, convex
Parent material: Clayey alluvium derived from interbedded sedimentary rock
Slope range: 5 to 12 percent
Surface fragments: None
Depth to restrictive feature: Greater than 80 inches
Drainage class: Well drained
Slowest permeability: Moderate (about 0.60 in/hr)
Available water capacity to 60 inches: High (about 10.2 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None

Depth to seasonal water saturation: Greater than 6 feet
Runoff class: Medium
Land capability class (non-irrigated): 3e
Hydric soil: No

Typical profile:
H1—0 to 6 inches; loam
H2—6 to 11 inches; loam
H3—11 to 35 inches; clay loam
H4—35 to 80 inches; clay

Use and Management Considerations

Cropland
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and help to minimize soil loss by erosion.
- The rooting depth of crops may be restricted by the high clay content.

Pasture and hayland
- Avoiding overgrazing can reduce the hazard of erosion.
- Maintaining healthy plants and a vegetative cover can reduce the hazard of erosion.
- Erosion control is needed when pastures are renovated.

Woodland
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

WaD—Waynesboro loam, 12 to 20 percent slopes

Map Unit Composition

Major components
Waynesboro and similar soils: 95 to 100 percent

Contrasting inclusions
Etowah soils: 0 to 5 percent

Component Descriptions

Waynesboro
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Terrace on upland
Landform position (two-dimensional): Summit
Slope shape (down, across): Convex, linear
Parent material: Clayey alluvium derived from interbedded sedimentary rock
Slope range: 12 to 20 percent
Surface fragments: None
Depth to restrictive feature: Greater than 80 inches
Drainage class: Well drained
Slowest permeability: Moderate (about 0.60 in/hr)
Available water capacity to 60 inches: High (about 10.2 inches)

Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: Medium
Land capability class (non-irrigated): 4e
Hydric soil: No

Typical profile:
H1—0 to 6 inches; loam
H2—6 to 11 inches; loam
H3—11 to 35 inches; clay loam
H4—35 to 80 inches; clay

Use and Management Considerations

Cropland
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and help to minimize soil loss by erosion.
- The rooting depth of crops may be restricted by the high clay content.

Pasture and hayland
- Avoiding overgrazing can reduce the hazard of erosion.
- Maintaining healthy plants and a vegetative cover can reduce the hazard of erosion.
- Erosion control is needed when pastures are renovated.

Woodland
- If the soil is disturbed, the slope increases the hazard of erosion.
- The slope increases excavation costs, poses safety hazards, and creates a potential for erosion during the construction of haul roads and log landings.
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.
- The low strength of the soil increases the cost of constructing haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- The slope restricts the use of equipment for preparing sites for planting and seeding.

WeD—Waynesboro-Etowah-Urban land complex, 5 to 20 percent slopes

Map Unit Composition

Major components
Waynesboro and similar soils: 25 to 55 percent
Etowah and similar soils: 30 to 45 percent
Urban land: 15 to 30 percent

Component Descriptions

Waynesboro
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Old high stream terrace on upland
Landform position (two-dimensional): Summit

Slope shape (down, across): Convex, convex
Parent material: Clayey alluvium derived from interbedded sedimentary rock
Slope range: 5 to 20 percent
Surface fragments: None
Depth to restrictive feature: Greater than 80 inches
Drainage class: Well drained
Slowest permeability: Moderate (about 0.60 in/hr)
Available water capacity to 60 inches: High (about 10.2 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: Medium
Land capability class (non-irrigated): Unspecified
Hydric soil: No

Typical profile:
H1—0 to 6 inches; loam
H2—6 to 11 inches; loam
H3—11 to 35 inches; clay loam
H4—35 to 80 inches; clay

Etowah
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Old high stream terrace on upland
Landform position (two-dimensional): Summit
Slope shape (down, across): Convex, concave
Parent material: Fine-loamy alluvium or colluvium that is commonly underlain by limestone residuum
Slope range: 5 to 20 percent
Surface fragments: None
Depth to restrictive feature: Greater than 80 inches
Drainage class: Well drained
Slowest permeability: Moderate (about 0.60 in/hr)
Available water capacity to 60 inches: High (about 10.8 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: Greater than 6 feet
Runoff class: Medium
Land capability class (non-irrigated): Unspecified
Hydric soil: No

Typical profile:
H1—0 to 12 inches; silt loam
H2—12 to 27 inches; loam
H3—27 to 80 inches; clay loam

Urban land
MLRA: 128 - Southern Appalachian Ridges and Valleys
Parent material: Areas where the surface is covered by roads, streets, parking lots, commercial buildings, houses, and other types of impervious ground cover (in places natural drainage has been altered by a system of ditches and storm drains)
Slope range: 5 to 20 percent

WhB—Whitwell loam, 1 to 4 percent slopes, occasionally flooded

Map Unit Composition

Major components
Whitwell and similar soils: 92 to 98 percent

Contrasting inclusions
Shady soils: 2 to 8 percent

Component Descriptions

Whitwell
MLRA: 128 - Southern Appalachian Ridges and Valleys
Landform: Low stream terrace in valley
Slope shape (down, across): Concave, linear
Parent material: Fine-loamy alluvium derived from interbedded sedimentary rock
Slope range: 1 to 4 percent
Surface fragments: None
Depth to restrictive feature: Greater than 80 inches
Drainage class: Moderately well drained
Slowest permeability: Moderate (about 0.60 in/hr)
Available water capacity to 60 inches: High (about 10.3 inches)
Shrink-swell potential: Low (about 1.5 LEP)
Flooding hazard: Occasional
Ponding hazard: None
Seasonal water saturation (depth, kind): About 24 to 36 inches, apparent water table
Runoff class: Low
Land capability class (non-irrigated): 2w
Hydric soil: No

Typical profile:
H1—0 to 10 inches; loam
H2—10 to 38 inches; clay loam
H3—38 to 80 inches; loam

Use and Management Considerations

Cropland
- All areas of this map unit are prime farmland.
- Careful selection and application of chemicals and fertilizers help to minimize the possibility of ground-water contamination.
- Measures that protect the soil from scouring and minimize the loss of crop residue by floodwaters are needed.
- Small grain crops may be damaged by flooding in winter and spring.

Pasture and hayland
- Forage production can be improved by seeding grass-legume mixtures that are tolerant of flooding.
- Sediment left on forage plants after a flood event may reduce palatability and forage intake by the grazing animal.

Woodland
- The low strength of the soil may cause the formation of ruts, which can result in unsafe conditions and damage to equipment.

- The low strength of the soil increases the cost of constructing haul roads and log landings.
- Flooding may result in damage to haul roads and increased maintenance costs.
- Flooding restricts the safe use of roads by log trucks.
- Because of the low soil strength, harvesting equipment may be difficult to operate and damage may result. The low strength of the soil may create unsafe conditions for log trucks.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

Use and Management of the Soils

This soil survey is an inventory and evaluation of the soils in the survey area. It can be used to adjust land uses to the limitations and potentials of natural resources and the environment. Also, it can help to prevent soil-related failures in land uses.

In preparing a soil survey, soil scientists, conservationists, engineers, and others collect extensive field data about the nature and behavioral characteristics of the soils. They collect data on erosion, droughtiness, flooding, and other factors that affect various soil uses and management. Field experience and collected data on soil properties and performance are used as a basis in predicting soil behavior.

Information in this section can be used to plan the use and management of soils for crops and pasture; as forestland; as sites for buildings, sanitary facilities, highways and other transportation systems, and parks and other recreational facilities; and as wildlife habitat. It can be used to identify the potentials and limitations of each soil for specific land uses and to help prevent construction failures caused by unfavorable soil properties.

Planners and others using soil survey information can evaluate the effect of specific land uses on productivity and on the environment in all or part of the survey area. The survey can help planners to maintain or create a land use pattern in harmony with the natural soil.

Contractors can use this survey to help locate sources of sand and gravel, roadfill, and topsoil. They can use it to identify areas where bedrock, wetness, or very firm soil layers can cause difficulty in excavation.

Environmental officials, highway officials, engineers, and others may also find this survey useful. The survey can help them plan the safe disposal of wastes and locate sites for pavements, sidewalks, campgrounds, playgrounds, lawns, and trees and shrubs.

Interpretive Ratings

The interpretive tables in this survey rate the soils in the survey area for various uses. Many of the tables identify some of the limitations that affect specified uses and indicate the severity of those limitations. The ratings in these tables are both verbal and numerical.

Rating Class Terms

Rating classes are expressed in the tables in terms that indicate the extent to which the soils are limited by all of the soil features that affect a specified use or in terms that indicate the suitability of the soils for the use. Thus, the tables may show limitation classes or suitability classes. Terms for the limitation classes are *not limited, slightly limited, somewhat limited,* and *very limited*. The suitability ratings are expressed as *well suited, moderately suited, poorly suited,* and *unsuited* or as *good, fair,* and *poor*.

Numerical Ratings

Numerical ratings in the tables indicate the relative severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use and the point at which the soil feature is not a limitation. The limitations appear in order from the most limiting to the least limiting. Thus, if more than one limitation is identified, the most severe limitation is listed first and the least severe one is listed last.

Crops and Pasture

General management needed for crops and pasture is suggested in this section. The estimated yields of the main crops and pasture plants are listed, the system of land capability classification used by the Natural Resources Conservation Service is explained, and prime farmland is described.

Planners of management systems for individual fields or farms should consider the detailed information given in the description of each soil under the heading “Detailed Soil Map Units.” Specific information can be obtained from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

In 2002, according to the U.S. Census of Agriculture, approximately 63,378 acres in Roane County was farmland and 27,780 acres of this farmland was cropland. Approximately 14,627 acres was used for forage (in land used for hay and grass silage).

The field crops suited to the soils and climate of Roane County are burley tobacco, soybeans, corn, and wheat. The nearly level to sloping soils in the survey area generally are well suited to row crops. However, most of the row crops are grown on uplands and old stream terraces because the acreage of bottom land and stream terraces is limited. The broad ridges and more nearly level areas are suited to grain crops. Very deep, well drained soils, such as Etowah, Waynesboro, Dewey, and Fullerton soils, are suited to tobacco and alfalfa. The more sloping areas of Fullerton, Pailo, Dewey, Armuchee, and Montevallo soils are more commonly used for hay and pasture. In addition to the land currently being cropped, some land that is idle, wooded, or pastured has a good potential for use as cropland. Food production could be increased considerably by applying the latest technology to all of the cropland in the survey area. The information in this survey can facilitate the application of such technology.

Managing Cropland

The management systems needed on cropland are those that help to protect or improve the soils, control erosion, and minimize water pollution caused by nutrients, soil particles, and plant residue carried by runoff. Water erosion is a major hazard on most of the soils used for crops or pasture in Roane County. It is a hazard on soils that have slopes of more than 2 percent. Examples of these soils are Dewey, Fullerton, Waynesboro, Armuchee, and Colbert. As the slope increases, the hazard of erosion and the difficulty in controlling erosion also increase. Loss of the surface layer through erosion is damaging for two reasons. First, productivity is reduced as the surface layer is lost and part of the subsoil is incorporated into the plow layer. Loss of the surface layer is especially damaging on soils that have a clayey subsoil, such as Dewey, Waynesboro, and Fullerton soils, and on soils that have a layer below the subsoil that limits the depth of the root zone, such as Armuchee and Townley soils. Second, erosion on farmland results in the sedimentation of streams. Control of erosion

minimizes this pollution and improves the quality of water for municipal and recreational uses and for fish and wildlife.

In many sloping areas of clayey soils, preparing a good seedbed is difficult because the original friable surface layer has eroded away. This degree of erosion is common in areas of Fullerton, Collegedale, Dewey, and Waynesboro soils. Erosion-control practices help to provide a protective surface cover, control runoff, and increase the rate of water infiltration. A cropping system that can keep plant cover on the surface for extended periods generally can keep soil losses to an amount that does not reduce the productivity of the soil. In sloping areas on livestock farms, which require pasture and hay, including forage crops of grasses and legumes in the cropping system helps to control erosion. The forage crops also add nitrogen or organic matter, or both, to the soils and improve soil tilth.

Minimizing tillage and leaving crop residue on the surface increase the rate of water infiltration and reduce the hazards of runoff and erosion. These practices can be effective on most of the soils in the county. In the more sloping areas used for corn, no-till farming helps to control erosion.

Terraces and diversions reduce the length of slopes and thus help to control runoff and erosion. They are most effective on deep or very deep, well drained soils that have long, uniform slopes.

Contour farming and contour stripcropping also help to control erosion. They are best suited to soils that have smooth, uniform slopes.

Wetness is a management concern on some soils in the county. Some areas of moderately well drained soils, such as Whitwell, Capshaw, and Hamblen, are used as cropland, but the wetness of these soils delays planting or hinders harvest in some years. Bloomingdale and Melvin soils, which are poorly drained, are rarely used for crop production.

Many soils on uplands and stream terraces are very strongly acid to moderately acid unless they are limed. Applications of ground limestone are needed to raise the pH level sufficiently for the production of some crops. The levels of available phosphorus and potassium are naturally low in most of these soils. Additions of lime and fertilizer should be based on the results of soil tests, the needs of the crop, and a realistic yield expectation. The Cooperative Extension Service can help to determine the kind and amount of fertilizer and lime needed and the proper method of application.

Managing Pasture and Hayland

In 2002, according to the U.S. Census of Agriculture, approximately 14,627 acres in Roane County was used for forage (in land used for hay and grass silage). In addition, there were an estimated 13,923 beef cattle in the county. Most of the hayland and pasture is in a mixture of grasses and legumes. Much of the hay is grown in rotation with pasture. Some of the higher quality hay is square bailed or preserved as silage.

A successful livestock enterprise depends on a forage program that provides large quantities of quality feed. Such a program can provide most of the feed for beef or dairy cattle. Renovation, deferred grazing, pasture rotation, proper fertility levels, and a well planned clipping and harvesting schedule are important management practices.

The nearly level and gently sloping, deep and very deep, well drained soils should be planted to the highest producing crops, such as corn silage, alfalfa, or a mixture of alfalfa and orchardgrass. Sod-forming grasses, such as tall fescue, minimize erosion in the steeper areas. Legumes can be established through renovation in areas that support sod-forming grasses.

Tall fescue is an important cool-season grass that is suited to a wide range of soil conditions. It is grown for both pasture and hay. The growth that occurs from August to November is commonly permitted to accumulate in the field and is “stockpiled” for

grazing late in the fall and winter. For maximum production, nitrogen fertilizer should be applied during the stockpiling period. The rate of application should be based on the desired production level.

Warm-season grasses can be planted between April 1 and June 15. They should be planted between June 1 and June 15 if weeds are a potential problem. Warm-season forage plants help to alleviate the “summer slump” of cool-season grasses. They grow well during warm periods. Their greatest growth occurs from mid-June through September, which is the period when the growth of cool-season grasses is low. Examples of warm-season grasses are eastern gammagrass, switchgrass, big bluestem, and Caucasian bluestem.

Renovation with legumes can increase forage yields. Renovation involves destroying part of the sod, applying lime and fertilizer, and seeding desirable forage species into the remaining sod. Adding legumes to grass stands provides higher quality feed. The legumes increase summer production. Alfalfa can fix an estimated 200 to 300 pounds of nitrogen per acre per year; red clover 100 to 200 pounds; ladino clover 100 to 150 pounds; and Korean lespedeza, 75 to 100 pounds.

Additional information concerning managing pasture and hayland can be obtained from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

Yields per Acre

The average yields per acre that can be expected of the principal crops grown under a high level of management are shown in table 5. In any given year, yields may be higher or lower than those indicated in the table because of variations in rainfall and other climatic factors. The land capability classification of map units in the survey area also is shown in the table.

The yields are based mainly on the experience and records of farmers, conservationists, and extension agents. Available yield data from nearby counties and results of field trials and demonstrations also are considered.

The management needed to obtain the indicated yields of the various crops depends on the kind of soil and the crop. Management can include drainage, erosion control, and protection from flooding; the proper planting and seeding rates; suitable crop varieties; appropriate and timely tillage; control of weeds, plant diseases, and harmful insects; favorable soil reaction and optimum levels of nitrogen, phosphorus, potassium, and trace elements for each crop; effective use of crop residues, manure, and green manure crops; and harvesting that ensures the smallest possible loss.

The estimated yields reflect the productive capacity of each soil for each of the principal crops. Yields are likely to increase as new production technology is developed. The productivity of a given soil compared with that of other soils, however, is not likely to change.

Crops other than those shown in table 5 are grown in the survey area, but estimated yields are not listed because the acreage of such crops is small. The local office of the Natural Resources Conservation Service or of the Cooperative Extension Service can provide more information about the management and productivity of the soils for those crops.

Land Capability Classification

Land capability classification shows, in a general way, the suitability of soils for production of field crops. Crops that require special management are excluded. The soils are grouped according to their limitations for crop production, the risk of damage by erosion if they are used for crops, and the way they respond to management. The criteria used in grouping the soils do not include major landshaping that would change

slope, depth, or other characteristics of the soils, nor do they include major reclamation projects. Capability classification is not an interpretation designed to show suitability and limitations of groups of soils for rangeland, for forestry, for engineering, or for environmental or residential purposes.

In the capability system, soils are generally grouped at two levels—capability class and subclass (USDA-SCS, 1961).

Capability classes, the broadest groups, are designated by the numbers 1 through 8. The numbers indicate progressively greater limitations and narrower choices for practical use. The classes are defined as follows:

Class 1 soils have slight limitations that restrict their use.

Class 2 soils have moderate limitations that restrict the choice of plants or that require moderate conservation practices.

Class 3 soils have severe limitations that restrict the choice of plants or that require special conservation practices, or both.

Class 4 soils have very severe limitations that restrict the choice of plants or that require very careful management, or both.

Class 5 soils are subject to little or no erosion but have other limitations, impractical to remove, that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.

Class 6 soils have severe limitations that make them unsuitable for cultivation and that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.

Class 7 soils have very severe limitations that make them unsuitable for cultivation and that restrict their use mainly to grazing, forestland, or wildlife habitat.

Class 8 soils and miscellaneous areas have limitations that are unsuited for commercial plant production and that restrict their use to recreational purposes, wildlife habitat, watershed, or aesthetic purposes.

Capability subclasses are soil groups within one class. They are designated by adding a small letter, *e, w, or s* to the class numeral, for example, 2e. The letter *e* shows that the main hazard is the risk of erosion unless close-growing plant cover is maintained; *w* shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); *s* shows that the soil is limited mainly because it is shallow, droughty, or stony.

In classes 1 and 8 there are no subclasses. Class 5 contains only the subclasses indicated by *w* or *s,* because the soils in class 5 are subject to little or no erosion. They have other significant limitations that restrict their use to pasture, rangeland, forestland, wildlife habitat, or recreation.

The acreage of soils in each capability class and subclass is shown in table 6. The capability classification of map units in this survey area is given in the section "Detailed Soil Map Units" and in the yields table.

Prime Farmland

Prime farmland is one of several kinds of important farmland defined by the U.S. Department of Agriculture. It is of major importance in meeting the Nation's short- and long-range needs for food and fiber. Because the supply of high-quality farmland is limited, the U.S. Department of Agriculture recognizes that responsible levels of government, as well as individuals, should encourage and facilitate the wise use of our Nation's prime farmland.

Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pasture, forest, or idle land, but it is not urban or built-up land or water areas. The soil qualities, growing season, and moisture supply are those needed for the soil to economically produce sustained high yields of crops where proper management,

including water management, and acceptable farming methods are applied. In general, prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, an acceptable salt and sodium content, and few or no rocks. It is permeable to water and air. It is not excessively erodible or saturated with water for long periods, and it is not frequently flooded during the growing season or is protected from flooding. Slope ranges from 0 to 6 percent. More detailed information about the criteria for prime farmland is available at the local office of the Natural Resources Conservation Service.

A recent trend in land use in some parts of the survey area has been the loss of prime farmland to industrial and residential uses. The loss of prime farmland to other uses puts pressure on marginal lands, which generally are more erodible, droughty, less productive, and cannot be easily cultivated.

The map units in the survey area that are considered prime farmland are listed in table 7. This list does not constitute a recommendation for a particular land use. On some soils included in the list, measures that overcome a hazard or limitation, such as flooding, wetness, and droughtiness, are needed. Onsite evaluation is needed to determine whether or not the hazard or limitation has been overcome by corrective measures. The extent of each listed map unit is shown in table 4. Their location is shown on the detailed soil maps. The soil qualities that affect use and management are described under the heading “Detailed Soil Map Units.”

Forest Productivity and Management

The tables in this section can help forest owners or managers plan the use of soils for timber production. They show the potential productivity of the soils and rate the soils according to the limitations that affect various aspects of forest management.

At one time all of Roane County was forested. According to the United States Forest Service Report, 169 thousand acres in the county (approximately 73 percent) remains forested. Roane County is twelfth in the State in total growing stock volume, with 356 million cubic feet of sound wood in commercial tree species, and thirty-second in the State in area capable of growing commercial wood, with 169 thousand acres of timberland. Of the timberland in Roane County, approximately 132,000 acres is in private ownership, 5,000 acres is owned by the forest industry, 6,000 acres belongs to the State of Tennessee, and 25,000 acres is miscellaneous federal land.

The soils of Roane County have the ability to produce good stands of commercial hardwood and pulpwood species. In most areas additional management is needed to achieve the best potential production. On better sites, plant competition from undesirable species is a major concern when establishing a new forest crop. Thinning out mature trees and undesirable species improves production on most established sites. Species conversion and increased stocking are also needed in some native areas to improve production. Protection from grazing, fire, and disease and insect control also improve stands.

Woodland is in several diverse areas of the county. Most of the woodland on the rolling hilly portions of the Cumberland Plateau is underlain by hard sandstone bedrock. Soils in these areas include Lily, Ramsey, Lonewood, and Hendon. Other large areas of woodland are on the steeper mountainsides and in deep gorges. Soils in these areas range from shallow to very deep, are cobbly and very stony, and are underlain by shale and sandstone bedrock. Petros, Gilpin, Bouldin, and Jefferson soils are dominant. These soils, with the exception of Petros, are well suited to trees. The shallow depth to bedrock in Petros soils, the steep and very steep side slopes, and cobbles and stones limit tree growth and the harvest of timber. The steep and very steep slopes are generally covered by a mixture of red oak, yellow-poplar, hickory, and

sugar maple. White pine and hemlock are also common on north- and east- facing slopes and on the lower third of side slopes.

Most of the woodland that is in the ridge and valley area of the county is along ridges underlain by cherty limestone, dolomite, or interbedded sandstone and shale. The soils on limestone or dolomitic ridges are well suited to tree growth and are deep or very deep. The dominant soils found on these ridges are Fullerton and Dewey. The main limitation affecting these soils is the steep slope in some areas. The dominant soils found on the ridges underlain by sandstone and shale range in depth from shallow to moderately deep. They include Montevallo, Townley, and Armuchee soils. The major limitations affecting production are depth to bedrock and steep side slopes.

Forest Productivity

In table 8, the *potential productivity* of merchantable or *common trees* on a soil is expressed as a site index and as a volume number. The *site index* is the average height, in feet, that dominant and codominant trees of a given species attain in a specified number of years. The site index applies to fully stocked, even-aged, unmanaged stands. Common trees are those that forest managers generally favor in intermediate or improvement cuttings and are selected on the basis of soil suitability, growth rate, quality, value, and current marketability. More detailed information regarding site index is available in the “National Forestry Manual,” which is available in local offices of the Natural Resources Conservation Service or on the Internet (USDA-NRCS, 1998b).

The *volume of wood fiber*, a number, is the yield likely to be produced by the most important tree species. This number, expressed as cubic feet per acre per year and calculated at the age of culmination of the mean annual increment (CMAI), indicates the amount of fiber produced in a fully stocked, even-aged, unmanaged stand.

Trees to manage are those that are preferred for planting, seeding, or natural regeneration and those that remain in the stand after thinning or partial harvest.

Forest Management

In table 9, parts I through V, interpretive ratings are given for various aspects of forest management. The ratings are both verbal and numerical.

Some rating class terms indicate the degree to which the soils are suited to a specified forest management practice. *Well suited* indicates that the soil has features that are favorable for the specified practice and has no limitations. Good performance can be expected, and little or no maintenance is needed. *Moderately suited* indicates that the soil has features that are moderately favorable for the specified practice. One or more soil properties are less than desirable, and fair performance can be expected. Some maintenance is needed. *Poorly suited* indicates that the soil has one or more properties that are unfavorable for the specified practice. Overcoming these unfavorable properties requires special design, extra maintenance, and costly alteration. *Unsuited* indicates that the expected performance of the soil is unacceptable for the specified practice or that extreme measures are needed to overcome the undesirable soil properties.

Numerical ratings in the table indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the specified forest management practice (1.00) and the point at which the soil feature is not a limitation (0.00).

Rating class terms for fire damage, utilized in substory management, and seedling mortality are expressed as *low, moderate,* and *high*. Where these terms are used, the numerical ratings indicate gradations between the point at which the potential for fire

damage or seedling mortality is highest (1.00) and the point at which the potential is lowest (0.00).

The paragraphs that follow indicate the soil properties considered in rating the soils for forest management practices. More detailed information about the criteria used in the ratings is available in the "National Forestry Manual," which is available in local offices of the Natural Resources Conservation Service or on the Internet (USDA-NRCS, 1998b).

For *limitations affecting construction of haul roads and log landings*, the ratings are based on slope, flooding, plasticity index, the hazard of soil slippage, content of sand, the Unified classification, rock fragments on or below the surface, depth to a restrictive layer, depth to a water table, and ponding. The limitations are described as slight, moderate, or severe. A rating of *slight* indicates that no significant limitations affect construction activities, *moderate* indicates that one or more limitations can cause some difficulty in construction, and *severe* indicates that one or more limitations can make construction very difficult or very costly.

The ratings of *suitability for log landings* are based on slope, rock fragments on the surface, plasticity index, content of sand, the Unified classification, depth to a water table, ponding, flooding, and the hazard of soil slippage. The soils are described as well suited, moderately suited, or poorly suited to use as log landings.

Ratings in the column *soil rutting hazard* are based on depth to a water table, rock fragments on or below the surface, the Unified classification, depth to a restrictive layer, and slope. Ruts form as a result of the operation of forestry equipment. The hazard is described as slight, moderate, or severe. A rating of *slight* indicates that the soil is subject to little or no rutting, *moderate* indicates that rutting is likely, and *severe* indicates that ruts form readily.

Ratings in the column *hazard of off-road or off-trail erosion* are based on slope and on soil erodibility factor K. The soil loss is caused by sheet or rill erosion in off-road or off-trail areas where 50 to 75 percent of the surface has been exposed by logging, grazing, mining, or other kinds of disturbance. The hazard is described as slight, moderate, severe, or very severe. A rating of *slight* indicates that erosion is unlikely under ordinary climatic conditions; *moderate* indicates that some erosion is likely and that erosion-control measures may be needed; *severe* indicates that erosion is very likely and that erosion-control measures, including revegetation of bare areas, are advised; and *very severe* indicates that significant erosion is expected, loss of soil productivity and off-site damage are likely, and erosion-control measures are costly and generally impractical.

Ratings in the column *hazard of erosion on roads and trails* are based on the soil erodibility factor K, slope, and content of rock fragments. The ratings apply to unsurfaced roads and trails. The hazard is described as slight, moderate, or severe. A rating of *slight* indicates that little or no erosion is likely; *moderate* indicates that some erosion is likely, that the roads or trails may require occasional maintenance; and that simple erosion-control measures are needed; and *severe* indicates that significant erosion is expected, that the roads or trails require frequent maintenance, and that costly erosion-control measures are needed.

Ratings in the column *suitability for roads (natural surface)* are based on slope, rock fragments on the surface, plasticity index, content of sand, the Unified classification, depth to a water table, ponding, flooding, and the hazard of soil slippage. The ratings indicate the suitability for using the natural surface of the soil for roads. The soils are described as well suited, moderately suited, or poorly suited to this use.

Ratings in the columns *suitability for hand planting* and *suitability for mechanical planting* are based on slope, depth to a restrictive layer, content of sand, plasticity index, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, moderately well suited, poorly suited, or

unsuited to these methods of planting. It is assumed that necessary site preparation is completed before seedlings are planted.

Ratings in the column *suitability for use of harvesting equipment* are based on slope, rock fragments on the surface, plasticity index, content of sand, the Unified classification, depth to a water table, and ponding. The soils are described as well suited, moderately suited, or poorly suited to this use.

Ratings in the column *suitability for mechanical site preparation (surface)* are based on slope, depth to a restrictive layer, plasticity index, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, poorly suited, or unsuited to this management activity. The part of the soil from the surface to a depth of about 1 foot is considered in the ratings.

Ratings in the column *suitability for mechanical site preparation (deep)* are based on slope, depth to a restrictive layer, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, poorly suited, or unsuited to this management activity. The part of the soil from the surface to a depth of about 3 feet is considered in the ratings.

Ratings in the column *potential for damage to soil by fire* are based on texture of the surface layer, content of rock fragments and organic matter in the surface layer, thickness of the surface layer, and slope. The soils are described as having a low, moderate, or high potential for this kind of damage. The ratings indicate an evaluation of the potential impact of prescribed fires or wildfires that are intense enough to remove the duff layer and consume organic matter in the surface layer.

Ratings in the column *potential for seedling mortality* are based on flooding, ponding, depth to a water table or bedrock, soil reaction, available water capacity, soil moisture regime, soil temperature regime, aspect, and slope. The soils are described as having a low, moderate, or high potential for seedling mortality.

Recreation

Hunting, boating, and fishing are common outdoor recreational activities in Roane County. The county has six wildlife management areas that are owned by the Tennessee Wildlife Resources Agency. Most of these areas have a combination of hunting and fishing opportunities, boating access sites, or hiking trails available. Several are located along Watts Bar Lake and encompass islands along the lake. Watts Bar Lake has a plethora of boating access sites and activities. The lake is host to a large number of fishing tournaments throughout the year. The town of Kingston is located along Watts Bar Lake and has several tourist attractions, such the historical site of Fort Southwest Point. This site is an excellent source of history concerning the early settlement of Roane County and the establishment of Kingston. Roane County has a park located along Watts Bar Lake and State Highway 70. The park offers a walking track, piers and fishing access sites, and picnic areas.

The soils of the survey area are rated in table 10, parts I and II, according to limitations that affect their suitability for recreation. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the recreational uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Slightly limited* indicates that the soil has features that are favorable for the specified use. The limitations are minor and can be easily overcome. Good performance and low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil

reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the table indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The ratings in the table are based on restrictive soil features, such as wetness, slope, and texture of the surface layer. Susceptibility to flooding is considered. Not considered in the ratings, but important in evaluating a site, are the location and accessibility of the area, the size and shape of the area and its scenic quality, vegetation, access to water, potential water impoundment sites, and access to public sewer lines. The capacity of the soil to absorb septic tank effluent and the ability of the soil to support vegetation also are important. Soils that are subject to flooding are limited for recreational uses by the duration and intensity of flooding and the season when flooding occurs. In planning recreational facilities, onsite assessment of the height, duration, intensity, and frequency of flooding is essential.

The information in table 10 can be supplemented by other information in this survey, for example, interpretations for building site development, construction materials, sanitary facilities, and water management.

Camp areas require site preparation, such as shaping and leveling the tent and parking areas, stabilizing roads and intensively used areas, and installing sanitary facilities and utility lines. Camp areas are subject to heavy foot traffic and some vehicular traffic. The ratings are based on the soil properties that affect the ease of developing camp areas and the performance of the areas after development. Slope, stoniness, and depth to bedrock or a fragipan are the main concerns affecting the development of camp areas.

The soil properties that affect the performance of the areas after development are those that influence trafficability and promote the growth of vegetation, especially in heavily used areas. For good trafficability, the surface of camp areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a fragipan, permeability, and toxic substances in the soil.

Picnic areas are subject to heavy foot traffic. Most vehicular traffic is confined to access roads and parking areas. The ratings are based on the soil properties that affect the ease of developing picnic areas and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of picnic areas. For good trafficability, the surface of picnic areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a fragipan, permeability, and toxic substances in the soil.

Playgrounds require soils that are nearly level, are free of stones, and can withstand intensive foot traffic. The ratings are based on the soil properties that affect the ease of developing playgrounds and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of playgrounds. For good trafficability, the surface of the playgrounds should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a fragipan, permeability, and toxic substances in the soil.

Paths and trails for hiking and horseback riding should require little or no slope modification through cutting and filling. The ratings are based on the soil properties that affect trafficability and erodibility. These properties are stoniness, depth to a water table, ponding, flooding, slope, and texture of the surface layer.

Off-road motorcycle trails require little or no site preparation. They are not covered with surfacing material or vegetation. Considerable compaction of the soil material is likely. The ratings are based on the soil properties that influence erodibility, trafficability, dustiness, and the ease of revegetation. These properties are stoniness, slope, depth to a water table, ponding, flooding, and texture of the surface layer.

Golf fairways are subject to heavy foot traffic and some light vehicular traffic. Cutting or filling may be required. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a fragipan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer. The suitability of the soil for traps, tees, roughs, and greens is not considered in the ratings.

Wildlife Habitat

Soils affect the kind and amount of vegetation that is available to wildlife as food and cover. They also affect the construction of water impoundments. The kind and abundance of wildlife depend largely on the amount and distribution of food, cover, and water. Wildlife habitat can be created or improved by planting the appropriate vegetation, by maintaining the existing plant cover, or by promoting the natural establishment of desirable plants.

In table 11, the soils in the survey area are rated according to their potential for providing habitat for various kinds of wildlife. This information can be used in planning parks, wildlife refuges, nature study areas, and other developments for wildlife; in selecting soils that are suitable for establishing, improving, or maintaining specific elements of wildlife habitat; and in determining the intensity of management needed for each element of the habitat.

The potential of the soil is rated good, fair, poor, or very poor. A rating of *good* indicates that the element or kind of habitat is easily established, improved, or maintained. Few or no limitations affect management, and satisfactory results can be expected. A rating of *fair* indicates that the element or kind of habitat can be established, improved, or maintained in most places. Moderately intensive management is required for satisfactory results. A rating of *poor* indicates that limitations are severe for the designated element or kind of habitat. Habitat can be created, improved, or maintained in most places, but management is difficult and must be intensive. A rating of *very poor* indicates that restrictions for the element or kind of habitat are very severe and that unsatisfactory results can be expected. Creating, improving, or maintaining habitat is impractical or impossible.

The elements of wildlife habitat are described in the following paragraphs.

Grain and seed crops are domestic grains and seed-producing herbaceous plants. Soil properties and features that affect the growth of grain and seed crops are depth of the root zone, texture of the surface layer, available water capacity, wetness, slope, surface stoniness, and flooding. Soil temperature and soil moisture also are considerations. Examples of grain and seed crops are corn, wheat, oats, and barley.

Grasses and legumes are domestic perennial grasses and herbaceous legumes. Soil properties and features that affect the growth of grasses and legumes are depth of the root zone, texture of the surface layer, available water capacity, wetness,

surface stoniness, flooding, and slope. Soil temperature and soil moisture also are considerations. Examples of grasses and legumes are tall fescue, bermudagrass, orchardgrass, ladino clover, annual lespedeza, and alfalfa.

Wild herbaceous plants are native or naturally established grasses and forbs, including weeds. Soil properties and features that affect the growth of these plants are depth of the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, and flooding. Soil temperature and soil moisture also are considerations. Examples of wild herbaceous plants are tall bluestem, goldenrod, beggarweed, panicum, carpetgrass, switchgrass, greenbrier, and eastern grama.

Hardwood trees and woody understory produce nuts or other fruit, buds, catkins, twigs, bark, and foliage. Soil properties and features that affect the growth of hardwood trees and shrubs are depth of the root zone, available water capacity, and wetness. Examples of these plants are oak, yellow-poplar, wild cherry, sweetgum, hawthorn, dogwood, hickory, and blackberry. Examples of fruit-producing shrubs that are suitable for planting on soils rated *good* are Russian-olive, autumn-olive, and crabapple.

Coniferous plants furnish browse and seeds. Soil properties and features that affect the growth of coniferous trees, shrubs, and ground cover are depth of the rooting zone, available water capacity, and wetness. Examples of coniferous plants are pine and eastern redcedar.

Wetland plants are annual and perennial wild herbaceous plants that grow on moist or wet sites. Submerged or floating aquatic plants are excluded. Soil properties and features affecting wetland plants are texture of the surface layer, wetness, reaction, salinity, slope, and surface stoniness. Examples of wetland plants are smartweed, wild millet, wildrice, rushes, sedges, cattails, and reeds.

Shallow water areas have an average depth of less than 5 feet. Some are naturally wet areas. Others are created by dams, levees, or other water-control structures. Soil properties and features affecting shallow water areas are depth to bedrock, wetness, surface stoniness, slope, and permeability. Examples of shallow water areas are marshes, waterfowl feeding areas, and ponds.

The habitat for various kinds of wildlife is described in the following paragraphs.

Habitat for openland wildlife consists of cropland, pasture, meadows, and areas that are overgrown with grasses, herbs, shrubs, and vines. These areas produce grain and seed crops, grasses and legumes, and wild herbaceous plants. Wildlife attracted to these areas include bobwhite quail, meadowlark, field sparrow, cottontail rabbit, groundhog, and red fox.

Habitat for woodland wildlife consists of areas of deciduous and/or coniferous plants and associated grasses, legumes, and wild herbaceous plants. Wildlife attracted to these areas include wild turkey, woodcock, thrushes, woodpeckers, squirrels, gray fox, raccoon, opossum, skunk, and white-tail deer.

Habitat for wetland wildlife consists of open, marshy or swampy shallow water areas. Some of the wildlife attracted to such areas are ducks, geese, blue heron, shore birds, muskrat, otter, mink, and beaver.

Engineering

This section provides information for planning land uses related to urban and residential development and to water management. Soils are rated for various uses, and the most limiting features are identified. Ratings are given for building site development, sanitary facilities, construction materials, and water management. The ratings are based on observed performance of the soils and on the estimated data and test data in the “Soil Properties” section.

Information in this section is intended for land use planning, for evaluating land use alternatives, and for planning site investigations prior to design and construction. The

information, however, has limitations. For example, estimates and other data generally apply only to that part of the soil between the surface and a depth of 5 to 7 feet. Because of the map scale, small areas of different soils have been included within the mapped areas of a specific soil.

The information is not site specific and does not eliminate the need for onsite investigation of the soils or for testing and analysis by personnel experienced in the design and construction of engineering works.

State ordinances and local regulations that restrict certain land uses or impose specific design criteria were not considered in preparing the information in this section. Complying with local ordinances and regulations should be a consideration in planning, in site selection, and in design.

Soil properties, site features, and observed performance were considered in determining the ratings in this section. During the fieldwork for this soil survey, determinations were made about particle-size distribution, liquid limit, plasticity index, soil reaction, depth to bedrock, hardness of bedrock, soil wetness, depth to a water table, ponding, slope, flooding, natural soil structure aggregation, and soil density. Data were collected about kinds of clay minerals, mineralogy of the sand and silt fractions, and the kinds of adsorbed cations. Estimates were made for erodibility, permeability, corrosivity, shrink-swell potential, available water capacity, and other behavioral characteristics affecting engineering uses.

In a general way, this information can be used to evaluate the potential of areas for residential, commercial, industrial, and recreational uses; make preliminary estimates of construction conditions; evaluate alternative routes for roads, streets, highways, pipelines, and underground cables; evaluate alternative sites for sanitary landfills, septic tank absorption fields, and sewage lagoons; plan detailed onsite investigations of soils and geology; locate potential sources of gravel, sand, fill material, and topsoil; plan drainage systems, ponds, terraces, and other structures for soil and water conservation; and predict performance of proposed small structures and pavements by comparing the performance of existing similar structures on the same or similar soils.

The information in the tables, along with the soil maps, the soil descriptions, and other data provided in this survey, can be used to make additional interpretations about the soils in this survey area, depending upon the use intended and the degree of confidence required.

Some of the terms used in this soil survey have a special meaning in soil science and are defined in the Glossary.

Building Site Development

Soil properties influence the development of building sites, including the selection of the site, the design of the structure, construction modifications, performance after construction, and maintenance. Table 12, parts I and II, show the degree and kind of soil limitations that affect dwellings with and without basements, small commercial buildings, local roads and streets, shallow excavations, and lawns and landscaping.

The ratings in the table are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect building site development. *Slightly limited* indicates that the soil has features that are favorable for the specified use. The limitations are minor and can be easily overcome. Good performance and low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special

design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the table indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Dwellings are single-family houses of three stories or less. For dwellings without basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. For dwellings with basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of about 7 feet. The ratings for dwellings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, linear extensibility (shrink-swell potential), and compressibility (which is inferred from the Unified classification). The properties that affect the ease and amount of excavation include depth to a water table, ponding, flooding, slope, depth to bedrock or a fragipan, hardness of bedrock or a fragipan, and the amount and size of rock fragments.

Small commercial buildings are structures that are less than three stories high and do not have basements. The foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. The ratings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, linear extensibility (shrink-swell potential), and compressibility (which is inferred from the Unified classification). The properties that affect the ease and amount of excavation include depth to a water table, ponding, flooding, slope, depth to bedrock or a fragipan, hardness of bedrock or a fragipan, and the amount and size of rock fragments.

Local roads and streets have an all-weather surface and carry automobile and light truck traffic all year. They have a subgrade of cut or fill material; a base of gravel, crushed rock, or soil material stabilized by lime or cement; and a surface of flexible material (asphalt), rigid material (concrete), or gravel with a binder (tar). The ratings are based on the soil properties that affect the ease of excavation and grading and the traffic-supporting capacity. The properties that affect the ease and amount of excavation include depth to a water table, ponding, flooding, slope, depth to bedrock or a fragipan, hardness of bedrock or a fragipan, and the amount and size of rock fragments. The properties that affect the traffic-supporting capacity are soil strength (as inferred from the AASHTO group index number), linear extensibility (shrink-swell potential), depth to a water table, and ponding or flooding.

Shallow excavations are trenches or holes dug to a maximum depth of 5 or 6 feet for graves, utility lines, open ditches, or other purposes. The ratings are based on the soil properties that influence the ease of digging and the resistance to sloughing. Depth to bedrock or a fragipan, hardness of bedrock or a fragipan, the amount of large stones, and dense layers influence the ease of digging, filling, and compacting. Depth to the seasonal high water table, flooding, and ponding restrict the period when excavations can be made. Slope influences the ease of using machinery. Soil texture, depth to the water table, and linear extensibility (shrink-swell potential) influence the resistance to sloughing.

Lawns and landscaping require soils on which turf and ornamental trees and shrubs can be established and maintained. Irrigation is not considered in the ratings. The

ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a fragipan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer.

Sanitary Facilities

Table 13, parts I and II, show the degree and kind of soil limitations that affect septic tank absorption fields, sewage lagoons, sanitary landfills, and daily cover for landfills. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Slightly limited* indicates that the soil has features that are favorable for the specified use. The limitations are minor and can be easily overcome. Good performance and low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the table indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Septic tank absorption fields are areas in which effluent from a septic tank is distributed into the soil through subsurface perforated pipe. Only that part of the soil between depths of 24 and 60 inches is evaluated. The ratings are based on the soil properties that affect absorption of the effluent, construction and maintenance of the system, and public health concerns. Permeability, depth to a water table, ponding, depth to bedrock or a restrictive layer, and flooding affect absorption of the effluent. Stones and boulders, hard bedrock, or a dense fragipan interfere with installation. Excessive slope can cause lateral seepage and surfacing of the effluent in downslope areas in addition to installation difficulties.

Some soils are underlain by loose sand, gravel, or highly fractured bedrock at a depth of less than 4 feet below the distribution lines. In these soils the absorption field may not adequately filter the effluent, particularly when the system is new. As a result, the ground water may become contaminated or seepage may occur in downslope areas.

Sewage lagoons are shallow ponds constructed to hold sewage while aerobic bacteria decompose the solid and liquid wastes. Lagoons should have a nearly level floor surrounded by cut slopes or embankments of compacted soil. Nearly impervious soil material for the lagoon floor and sides is required to minimize seepage and contamination of ground water. Considered in the ratings are slope, permeability, depth to a water table, ponding, depth to bedrock or a fragipan, flooding, large stones, and content of organic matter.

Soil permeability is a critical property affecting the suitability for sewage lagoons. Most porous soils eventually become sealed when they are used as sites for sewage lagoons. Until sealing occurs, however, the hazard of pollution is very severe. Soils that have a permeability rate of more than 2 inches per hour are too porous for the

proper functioning of sewage lagoons. In these soils, seepage of the effluent can result in contamination of the ground water. Ground-water contamination is also a hazard in karst landscapes, if highly fractured bedrock is within a depth of 40 inches, if the water table is high enough to raise the level of sewage in the lagoon, or if floodwater overflows the lagoon.

A high content of organic matter is detrimental to proper functioning of the lagoon because it inhibits aerobic activity. Slope, bedrock, and fragipans can cause construction problems, and large stones can hinder compaction of the lagoon floor. If the lagoon is to be uniformly deep throughout, the slope must be gentle enough and the soil material must be thick enough over bedrock or a fragipan to make land smoothing practical.

A *trench sanitary landfill* is an area where solid waste is placed in successive layers in an excavated trench. The waste is spread, compacted, and covered daily with a thin layer of soil excavated at the site. When the trench is full, a final cover of soil material at least 2 feet thick is placed over the landfill. The ratings in the table are based on the soil properties that affect the risk of pollution, the ease of excavation, trafficability, and revegetation. These properties include permeability, depth to bedrock or a fragipan, depth to a water table, ponding, slope, flooding, texture, stones and boulders, soil reaction, and content of salts and sodium. Unless otherwise stated, the ratings apply only to that part of the soil within a depth of about 6 feet. For deeper trenches, an onsite investigation will be needed.

Hard bedrock, creviced bedrock, or highly fractured rock strata in or directly below the proposed trench bottom can affect the ease of excavation and the hazard of ground-water pollution. Slope affects construction of the trenches and the movement of surface water around the landfill. It also affects the construction and performance of roads in areas of the landfill.

Soil texture and consistence affect the ease with which the trench is dug and the ease with which the soil can be used as daily or final cover. They determine the workability of the soil when dry and when wet. Soils that are plastic and sticky when wet are difficult to excavate, grade, or compact and are difficult to place as a uniformly thick cover over a layer of refuse.

The soil material used as the final cover for a trench landfill should be suitable for plants. It should not have excess sodium or salts and should not be too acid. The surface layer generally has the best workability, the highest content of organic matter, and the best potential for plants. Material from the surface layer should be stockpiled for use as the final cover.

In an *area sanitary landfill*, solid waste is placed in successive layers on the surface of the soil. The waste is spread, compacted, and covered daily with a thin layer of soil from a source away from the site. A final cover of soil material at least 2 feet thick is placed over the completed landfill. The ratings in the table are based on the soil properties that affect trafficability and the risk of pollution. These properties include flooding, permeability, depth to a water table, ponding, slope, and depth to bedrock or a fragipan.

Flooding is a serious problem because it can result in pollution in areas downstream from the landfill. If permeability is too rapid or if highly fractured bedrock, or a water table is close to the surface, the leachate can contaminate the water supply. Slope is a consideration because of the extra grading required to maintain roads in the steeper areas of the landfill. Also, leachate may flow along the surface of the soils or in fractured bedrock layers in the steeper areas and cause seepage problems.

Daily cover for landfill is the soil material that is used to cover compacted solid waste in an area sanitary landfill. The soil material is obtained off site, transported to the landfill, and spread over the waste. The ratings in the table also apply to the final cover for a landfill. They are based on the soil properties that affect workability, the ease of digging, and the ease of moving and spreading the material over the refuse

daily during wet and dry periods. Some of these properties include soil texture, depth to a water table, ponding, rock fragments, slope, depth to bedrock, reaction, and content of salts, sodium, or lime.

Loamy or silty soils that are free of large stones and excess gravel are the best cover for a landfill. Clayey soils may be sticky and difficult to spread; sandy soils are subject to wind erosion.

Slope affects the ease of excavation and of moving the cover material. Also, it can influence runoff, erosion, and reclamation of the borrow area.

After soil material has been removed, the soil material remaining in the borrow area must be thick enough over bedrock or any root-restricting layer to permit revegetation. The soil material used as the final cover for a landfill should be suitable for plants. It should not have excess sodium, salts, or lime and should not be too acid.

Construction Materials

Table 14, parts I and II, give information about the soils as potential sources of gravel, sand, topsoil, reclamation material, and roadfill. Normal compaction, minor processing, and other standard construction practices are assumed.

The soils are rated *good, fair,* or *poor* as potential sources of topsoil, reclamation material, and roadfill. The features that limit the soils as sources of these materials are specified in the table. The numerical ratings given after the specified features indicate the degree to which the features limit the soils as sources of topsoil, reclamation material, or roadfill. The lower the number, the greater the limitation.

The soils are rated as a *good, fair,* or *poor* source of sand and gravel. A rating of *good* or *fair* means that the source material is likely to be in or below the soil. The numerical ratings in these columns indicate the degree of probability. The number 0.00 indicates that the soil is an improbable source. A number between 0.00 and 1.00 indicates the degree to which the soil is a probable source of sand or gravel.

Gravel and *sand* are natural aggregates suitable for commercial use with a minimum of processing. They are used in many kinds of construction. Specifications for each use vary widely. In table 14, only the probability of finding material in suitable quantity is evaluated. The suitability of the material for specific purposes is not evaluated, nor are factors that affect excavation of the material. The properties used to evaluate the soil as a source of sand or gravel are gradation of grain sizes (as indicated by the Unified classification of the soil), the thickness of suitable material, and the content of rock fragments. If the lowest layer of the soil contains sand or gravel, the soil is rated as a probable source regardless of thickness. The assumption is that the sand or gravel layer below the depth of observation exceeds the minimum thickness.

Reclamation material is used in areas that have been drastically disturbed by surface mining or similar activities. When these areas are reclaimed, layers of soil material or unconsolidated geological material, or both, are replaced in a vertical sequence in such a way that the reconstructed soil favors plant growth. The ratings in the table do not apply to quarries and other mined or borrowed areas that require an off-site source of reconstruction material. The ratings are based on the soil properties that affect erosion, stability of the surface and subsoil, and the productive potential of the reconstructed soil. Some of these properties include the content of sodium, salts, and calcium carbonate; reaction; available water capacity; erodibility; texture; content of rock fragments; content of organic matter; and other features that dominantly affect fertility and productivity.

Roadfill is soil material that is excavated in one place and used in road embankments in another place. In this table, the soils are rated as a source of roadfill for low embankments, generally less than 6 feet high and less exacting in design than higher embankments.

The ratings are for the whole soil, from the surface to a depth of about 5 feet. It is assumed that soil layers will be mixed when the soil material is excavated and spread.

The ratings are based on the amount of suitable material and on soil properties that affect the ease of excavation and the performance of the material after it is in place. The thickness of the suitable material is a major consideration. The ease of excavation is affected by large stones, depth to a water table, and slope. How well the soil performs in place after it has been compacted and drained is determined by its strength (as inferred from the AASHTO classification of the soil) and linear extensibility (shrink-swell potential).

Topsoil is used to cover an area so that vegetation can be established and maintained. The upper 40 inches of a soil is evaluated for use as topsoil. Also evaluated is the reclamation potential of the borrow area. The ratings are based on the soil properties that affect plant growth; the ease of excavating, loading, and spreading the material; and reclamation of the borrow area. Toxic substances, soil reaction, and the properties that are inferred from soil texture, such as available water capacity and fertility, affect plant growth. The ease of excavating, loading, and spreading is affected by rock fragments, slope, depth to a water table, soil texture, and thickness of suitable material. Reclamation of the borrow area is affected by slope, depth to a water table, rock fragments, depth to bedrock, and toxic material.

The surface layer of most soils is generally preferred for topsoil because of its organic matter content. Organic matter greatly increases the absorption and retention of moisture and nutrients for plant growth.

Water Management

Table 15 gives information on the soil properties and site features that affect water management. The degree and kind of soil limitations are given for pond reservoir areas; embankments, dikes, and levees; and aquifer-fed excavated ponds. The limitations are considered *not limited* if soil properties and site features are generally favorable for the indicated use and limitations are minor and are easily overcome; *somewhat limited* if soil properties or site features are not favorable for the indicated use and special planning, design, or maintenance is needed to overcome or minimize the limitations; and *very limited* if soil properties or site features are so unfavorable or so difficult to overcome that special design, significant increase in construction costs, and possibly increased maintenance are required.

Pond reservoir areas hold water behind a dam or embankment. Soils best suited to this use have low seepage potential in the upper 60 inches. The seepage potential is determined by the permeability of the soil and the depth to fractured bedrock or other permeable material. Excessive slope can affect the storage capacity of the reservoir area.

Embankments, dikes, and levees are raised structures of soil material, generally less than 20 feet high, constructed to impound water or to protect land against overflow. In this table, the soils are rated as a source of material for embankment fill. The ratings apply to the soil material below the surface layer to a depth of about 5 feet. It is assumed that soil layers will be uniformly mixed and compacted during construction.

The ratings do not indicate the ability of the natural soil to support an embankment. Soil properties to a depth even greater than the height of the embankment can affect performance and safety of the embankment. Generally, deeper onsite investigation is needed to determine these properties.

Soil material in embankments must be resistant to seepage, piping, and erosion and have favorable compaction characteristics. Unfavorable features include less than 5 feet of suitable material and a high content of stones or boulders, organic matter, or

salts or sodium. A high water table affects the amount of usable material. It also affects trafficability.

Aquifer-fed excavated ponds are pits that extend to a ground-water aquifer or to a depth below a permanent water table. Excluded are ponds that are fed only by surface runoff and embankment ponds that impound water 3 feet or more above the original surface. Excavated ponds are affected by depth to a permanent water table, permeability of the aquifer, and quality of the water as inferred from the salinity of the soil. Depth to bedrock and the content of large stones affect the ease of excavation.

Soil Properties

Data relating to soil properties are collected during the course of the soil survey.

Soil properties are ascertained by field examination of the soils and by laboratory index testing of some benchmark soils. Established standard procedures are followed. During the survey, many shallow borings are made and examined to identify and classify the soils and to delineate them on the soil maps. Samples are taken from some typical profiles and tested in the laboratory to determine particle-size distribution, plasticity, and compaction characteristics.

Estimates of soil properties are based on field examinations, on laboratory tests of samples from the survey area, and on laboratory tests of samples of similar soils in nearby areas. Tests verify field observations, verify properties that cannot be estimated accurately by field observation, and help to characterize key soils.

The estimates of soil properties are shown in the tables. They include engineering index properties, physical and chemical properties, and pertinent soil and water features.

Engineering Index Properties

Table 16 gives the engineering classifications and the range of index properties for the layers of each soil in the survey area.

Depth to the upper and lower boundaries of each layer is indicated in inches.

Texture is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in a mass of the soil. “Loam,” for example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If the content of gravel is 15 percent or more, an appropriate modifier is added, for example, “gravelly.” Textural terms are defined in the Glossary.

Classification of the soils is determined according to the Unified soil classification system (ASTM, 1998) and the system adopted by the American Association of State Highway and Transportation Officials (AASHTO, 1998).

The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to particle-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content. Sandy and gravelly soils are identified as GW, GP, GM, GC, SW, SP, SM, and SC; silty and clayey soils as ML, CL, OL, MH, CH, and OH; and highly organic soils as PT. Soils exhibiting engineering properties of two groups can have a dual classification, for example, CL-ML.

The AASHTO system classifies soils according to those properties that affect roadway construction and maintenance. In this system, the fraction of a mineral soil that is less than 3 inches in diameter is classified in one of seven groups from A-1 through A-7 on the basis of particle-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines (silt and clay). At the other extreme, soils in group A-7 are fine grained. Highly organic soils are classified in group A-8 on the basis of visual inspection.

If laboratory data are available, the A-1, A-2, and A-7 groups are further classified as A-1-a, A-1-b, A-2-4, A-2-5, A-2-6, A-2-7, A-7-5, or A-7-6. As an additional

refinement, the suitability of a soil as subgrade material can be indicated by a group index number. Group index numbers range from 0 for the best subgrade material to 20 or higher for the poorest.

Rock fragments larger than 10 inches in diameter and 3 to 10 inches in diameter are indicated as a percentage of the total soil on a dry-weight basis. The percentages are estimates determined mainly by converting volume percentage in the field to weight percentage.

Percentage (of soil particles) passing designated sieves is the percentage of the soil fraction less than 3 inches in diameter based on an oven-dry weight. The sieves, numbers 4, 10, 40, and 200 (USA Standard Series), have openings of 4.76, 2.00, 0.420, and 0.074 millimeters, respectively. Estimates are based on laboratory tests of soils sampled in the survey area and in nearby areas and on estimates made in the field.

Liquid limit and *plasticity index* (Atterberg limits) indicate the plasticity characteristics of a soil. The estimates are based on test data from the survey area or from nearby areas and on field examination.

Physical Properties

Table 17 a shows estimates of some physical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated in inches.

Particle size is the effective diameter of a soil particle as measured by sedimentation, sieving, or micrometric methods. Particle sizes are expressed as classes with specific effective diameter class limits. The broad classes are sand, silt, and clay, ranging from the larger to the smaller.

Sand as a soil separate consists of mineral soil particles that are 0.05 millimeter to 2 millimeters in diameter. In table 17, the estimated sand content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Silt as a soil separate consists of mineral soil particles that are 0.002 to 0.05 millimeter in diameter. In the table, the estimated silt content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Clay as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. In the table, the estimated clay content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of sand, silt, and clay affects the physical behavior of a soil. Particle size is important for engineering, agronomic, residential, and commercial interpretations, for determination of soil hydrologic qualities, and for soil classification.

The amount and kind of clay affect the fertility and physical condition of the soil and the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, permeability, plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage, root penetration, and earthmoving operations.

Moist bulk density is the weight of soil (oven dry) per unit volume. Volume is measured when the soil is at field moisture capacity, that is, the moisture content at $^{1}/_{3}$- or $^{1}/_{10}$-bar (33kPa or 10kPa) moisture tension. Weight is determined after the soil is dried at 105 degrees C. In the table, the estimated moist bulk density of each soil horizon is expressed in grams per cubic centimeter of soil material that is less than 2 millimeters in diameter. Bulk density data are used to compute shrink-swell potential,

available water capacity, total pore space, and other soil properties. The moist bulk density of a soil indicates the pore space available for movement of water, roots, and air. Depending on soil texture, a bulk density of more than 1.4 restricts water storage and root penetration. Moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

Saturated hydraulic conductivity refers to the ability of a soil to transmit water or air. The term “permeability,” as used in soil surveys, indicates saturated hydraulic conductivity (K_{sat}). The estimates in the table indicate the approximate rate of water movement, in inches per hour (in/hr), when the soil is saturated and under atmospheric pressure. They are based on soil characteristics observed in the field, most importantly structure, porosity, and texture. Permeability is a major consideration in the design of soil drainage systems and septic tank absorption fields.

Available water capacity refers to the quantity of water that the soil is capable of storing for use by plants. The capacity for water storage is given in inches of water per inch of soil for each layer. The capacity varies, depending on soil properties that affect retention of water. The most important properties are the content of organic matter, soil texture, bulk density, depth to bedrock or a restrictive layer, and soil structure. Available water capacity is an important factor in the choice of plants or crops to be grown and in the design and management of irrigation systems. Available water capacity is not an estimate of the quantity of water actually available to plants at any given time.

Linear extensibility refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. It is an expression of the volume change between the water content of the clod at $^{1}/_{3}$- or $^{1}/_{10}$-bar tension (33kPa or 10kPa tension) and oven dryness. The volume change is reported in the table as a percent change for the whole soil. Volume change is influenced by the amount and type of clay minerals in the soil.

Linear extensibility is used to determine the shrink-swell potential of soils. The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings and other structures, to roads, and to plant roots. Special design and materials are needed to help overcome this limitation in construction of structures, roads, and other permanent installations.

O*rganic matter* is the plant and animal residue in the soil at various stages of decomposition. In table 17, the estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of organic matter in a soil can be maintained by returning crop residue to the soil, using no-till planting practices, maintaining the soil in permanent vegetative cover for long periods, spreading mulch on the surface, and leaving duff on the surface after timber operations. Organic matter has a positive effect on available water capacity, water infiltration, soil organism activity, and tilth. It is a source of nitrogen and other nutrients for plants and soil organisms.

Erosion factors are shown in table 17 as the K factor (Kw and Kf) and the T factor. Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and permeability. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

Erosion factor Kw indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

Erosion factor Kf indicates the erodibility of the fine-earth fraction, or the material less than 2 millimeters in size.

Erosion factor T is an estimate of the maximum average annual rate of soil erosion by water that can occur without affecting crop productivity over a sustained period. The rate is in tons per acre per year.

Wind erodibility groups are made up of soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible. The groups are as follows:

1. Coarse sands, sands, fine sands, and very fine sands.
2. Loamy coarse sands, loamy sands, loamy fine sands, loamy very fine sands, ash material, and sapric soil material.
3. Coarse sandy loams, sandy loams, fine sandy loams, and very fine sandy loams.

4L. Calcareous loams, silt loams, clay loams, and silty clay loams.

4. Clays, silty clays, noncalcareous clay loams, and silty clay loams that are more than 35 percent clay.
5. Noncalcareous loams and silt loams that are less than 20 percent clay and sandy clay loams, sandy clays, and hemic soil material.
6. Noncalcareous loams and silt loams that are more than 20 percent clay and noncalcareous clay loams that are less than 35 percent clay.
7. Silts, noncalcareous silty clay loams that are less than 35 percent clay, and fibric soil material.
8. Soils that are not subject to wind erosion because of coarse fragments on the surface or because of surface wetness.

Chemical Properties

Table 18 shows estimates of some chemical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated in inches.

Effective cation-exchange capacity refers to the sum of extractable cations plus aluminum expressed in terms of milliequivalents per 100 grams of soil. It is determined for soils that have pH of less than 5.5.

Soil reaction is a measure of acidity or alkalinity. The pH of each soil horizon is based on many field tests. For many soils, values have been verified by laboratory analyses (USDA-NRCS, 1996). Soil reaction is important in selecting crops and other plants, in evaluating soil amendments for fertility and stabilization, and in determining the risk of corrosion.

Water Features

Table 19 gives estimates of various water features. The estimates are used in land use planning that involves engineering considerations.

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

Surface runoff refers to the loss of water from an area by flow over the land surface.

The *months* in the table indicate the portion of the year in which the feature is most likely to be a concern.

Water table refers to a saturated zone in the soil. Table 19 indicates, by month, depth to the top (*upper limit*) and base (*lower limit*) of the saturated zone in most years. Estimates of the upper and lower limits are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely gray colors or mottles (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

Ponding is standing water in a closed depression. Unless a drainage system is installed, the water is removed only by percolation, transpiration, or evaporation. Table 19 indicates *surface water depth* and the *duration* and *frequency* of ponding. Duration is expressed as *very brief* if less than 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, rare, occasional, and frequent. *None* means that ponding is not probable; *rare* that it is unlikely but possible under unusual weather conditions (the chance of ponding is nearly 0 percent to 5 percent in any year); *occasional* that it occurs, on the average, once or less in 2 years (the chance of ponding is 5 to 50 percent in any year); and *frequent* that it occurs, on the average, more than once in 2 years (the chance of ponding is more than 50 percent in any year).

Flooding is the temporary inundation of an area caused by overflowing streams or rivers, by runoff from adjacent slopes, or by tides. Water standing for short periods after rainfall or snowmelt is not considered flooding, and water standing in swamps and marshes is considered ponding rather than flooding.

Duration and *frequency* are estimated. Duration is expressed as *extremely brief* if 0.1 hour to 4 hours, *very brief* if 4 hours to 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent. *None* means that flooding is not probable; *very rare* that it is very unlikely but possible under extremely unusual weather conditions (the chance of flooding is less than 1 percent in any year); *rare* that it is unlikely but possible under unusual weather conditions (the chance of flooding is 1 to 5 percent in any year); *occasional* that it occurs infrequently under normal weather conditions (the chance of flooding is 5 to 50 percent in any year); *frequent* that it is likely to occur often under normal weather conditions (the chance of flooding is more than 50 percent in any year but is less than 50 percent in all months in any year); and *very frequent* that it is likely to occur very often under normal weather conditions (the chance of flooding is more than 50 percent in all months of any year).

The information is based on evidence in the soil profile, namely thin strata of gravel, sand, silt, or clay deposited by floodwater; irregular decrease in organic matter content

with increasing depth; and little or no horizon development. It is also based on local and flood-gauging station records.

Also considered are local information about the extent and levels of flooding and the relation of each soil on the landscape to historically recorded floods. Information on the extent of flooding based on soil data is less specific than that provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.

Soil Features

Table 20 gives estimates of various soil features. The estimates are used in land use planning that involves engineering considerations.

A *restrictive layer* is a nearly continuous layer that has one or more physical and chemical properties that significantly impede the movement of water and air through the soil or that restrict roots or otherwise provide an unfavorable rooting environment. Examples are bedrock, fragipans, dense layers, and frozen layers. The table indicates the hardness of the restrictive layer, which significantly affects the ease of excavation. *Depth to top* is the vertical distance from the soil surface to the upper boundary of the restrictive layer.

Potential for frost action is the likelihood of upward or lateral expansion of the soil caused by the formation of segregated ice lenses (frost heave) and the subsequent collapse of the soil and loss of strength on thawing. Frost action occurs when moisture moves into the freezing zone of the soil. Temperature, texture, density, permeability, content of organic matter, and depth to the water table are the most important factors considered in evaluating the potential for frost action. It is assumed that the soil is not insulated by vegetation or snow and is not artificially drained. Silty and highly structured, clayey soils that have a high water table in winter are the most susceptible to frost action. Well drained, very gravelly, or very sandy soils are the least susceptible. Frost heave and low soil strength during thawing cause damage to pavements and other rigid structures.

Risk of corrosion pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens uncoated steel or concrete. The rate of corrosion of uncoated steel is related to such factors as soil moisture, particle-size distribution, acidity, and electrical conductivity of the soil. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The steel or concrete in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than the steel or concrete in installations that are entirely within one kind of soil or within one soil layer.

For uncoated steel, the risk of corrosion, expressed as *low, moderate,* or *high,* is based on soil drainage class, total acidity, electrical resistivity near field capacity, and electrical conductivity of the saturation extract.

For concrete, the risk of corrosion also is expressed as *low, moderate,* or *high*. It is based on soil texture, acidity, and amount of sulfates in the saturation extract.

Classification of the Soils

The system of soil classification used by the National Cooperative Soil Survey has six categories (USDA, 1998a and 1999). Beginning with the broadest, these categories are the order, suborder, great group, subgroup, family, and series. Classification is based on soil properties observed in the field or inferred from those observations or from laboratory measurements. Table 21 shows the classification of the soils in the survey area. The categories are defined in the following paragraphs.

ORDER. Twelve soil orders are recognized. The differences among orders reflect the dominant soil-forming processes and the degree of soil formation. Each order is identified by a word ending in *sol*. An example is Alfisol.

SUBORDER. Each order is divided into suborders primarily on the basis of properties that influence soil genesis and are important to plant growth or properties that reflect the most important variables within the orders. The last syllable in the name of a suborder indicates the order. An example is Udalf (*Ud*, meaning humid, plus *alf*, from Alfisol).

GREAT GROUP. Each suborder is divided into great groups on the basis of close similarities in kind, arrangement, and degree of development of pedogenic horizons; soil moisture and temperature regimes; type of saturation; and base status. Each great group is identified by the name of a suborder and by a prefix that indicates a property of the soil. An example is Hapludalfs (*Hapl*, meaning minimal horizonation, plus *udalf*, the suborder of the Alfisols that has a udic moisture regime).

SUBGROUP. Each great group has a typic subgroup. Other subgroups are intergrades or extragrades. The typic subgroup is the central concept of the great group; it is not necessarily the most extensive. Intergrades are transitions to other orders, suborders, or great groups. Extragrades have some properties that are not representative of the great group but do not indicate transitions to any other taxonomic class. Each subgroup is identified by one or more adjectives preceding the name of the great group. The adjective *Typic* identifies the subgroup that typifies the great group. An example is Typic Hapludalfs.

FAMILY. Families are established within a subgroup on the basis of physical and chemical properties and other characteristics that affect management. Generally, the properties are those of horizons below plow depth where there is much biological activity. Among the properties and characteristics considered are particle size, mineral content, soil temperature regime, clay activity, soil depth, and reaction. A family name consists of the name of a subgroup preceded by terms that indicate soil properties. An example is fine, mixed, semiactive, thermic Typic Hapludalfs.

SERIES. The series consists of soils within a family that have horizons similar in color, texture, structure, reaction, consistence, mineral and chemical composition, and arrangement in the profile.

Soil Series and Their Morphology

In this section, each soil series recognized in the survey area is described. Characteristics of the soil and the material in which it formed are identified for each series. A pedon, a small three-dimensional area of soil, that is typical of the series in the survey area is described. The detailed description of each soil horizon follows

standards in the “Soil Survey Manual” (USDA, 1993). Many of the technical terms used in the descriptions are defined in “Soil Taxonomy” (USDA, 1999) and in “Keys to Soil Taxonomy” (USDA, 1998a). Unless otherwise indicated, colors in the descriptions are for moist soil. Following the pedon description is the range of important characteristics of the soils in the series.

Allen Series

MLRA: 128
Map unit(s):
AeC—Allen loam, 5 to 12 percent slopes
AeD—Allen loam, 12 to 20 percent slopes
AfD—Allen-Jefferson-Urban land complex, 5 to 20 percent slopes
Depth class: Very deep
Drainage class: Well drained
Saturated hydraulic conductivity (K_{sat}): Moderately high
Landform(s): Mountain slope on mountains
Landform position(s) (three-dimensional): Mountain base
Parent material: Fine-loamy colluvium derived from sandstone and shale
Elevation: 730 to 1,400 feet
Slope: 5 to 20 percent
Associated soils: Jefferson, Gilpin, Bouldin, Petros, Armuchee, Montevallo, and Townley
Climatic data:
Mean annual precipitation: 51 to 67 inches
Mean annual air temperature: 44 to 69 degrees F
Frost-free period: 183 to 247 days
Taxonomic class: Fine-loamy, siliceous, semiactive, thermic Typic Paleudults

Typical Pedon

Location in survey area: Allen loam, 12 to 20 percent slopes; in Roane County; 1 mile south of the intersection of Highway 70N and Highway 27S on Highway 27, turn right on Mt. View Road, travel 0.6 mile, 0.2 mile west of the road; USGS Rockwood, Tennessee topographic quadrangle; latitude 35 degrees 49 minutes 39.00 seconds north and longitude 84 degrees 43 minutes 42.00 seconds west; UTM Zone 16, 705202 meters easting, 3967198 meters northing; NAD83. (Colors are for moist soil unless otherwise noted.)

A—0 to 8 centimeters (0.0 to 3.0 inches); brown (10YR 4/3) loam; weak fine granular structure; very friable; common fine and common medium roots throughout; 5 percent sandstone gravel; slightly acid, pH 6.0; clear smooth boundary.
Bt1—8 to 71 centimeters (3.0 to 28.0 inches); yellowish red (5YR 5/6) clay loam; weak fine subangular blocky structure; friable; common fine and common medium roots throughout; few discontinuous faint reddish brown (5YR 5/4) clay films on all faces of peds; 10 percent sandstone gravel; moderately acid, pH 5.5; diffuse smooth boundary.
Bt2—71 to 97 centimeters (28.0 to 38.0 inches); yellowish red (5YR 5/6) gravelly clay loam; moderate medium subangular blocky structure; friable; common fine and common medium roots throughout; few discontinuous faint reddish brown (5YR 5/4) clay films on all faces of peds; 19 percent sandstone gravel; strongly acid, pH 5.0; diffuse smooth boundary.
Bt3—97 to 117 centimeters (38.0 to 46.0 inches); yellowish red (5YR 5/8) gravelly clay loam; moderate medium subangular blocky structure; friable; common fine roots throughout; common discontinuous faint yellowish red (5YR 5/6) clay films on all

faces of peds; 19 percent sandstone gravel; strongly acid, pH 5.0; diffuse smooth boundary.

Bt4—117 to 178 centimeters (46.0 to 70.0 inches); red (2.5YR 5/6) gravelly clay loam; moderate medium subangular blocky structure; friable; common discontinuous distinct reddish brown (2.5YR 5/4) clay films on all faces of peds; 20 percent sandstone gravel; strongly acid, pH 5.0.

Range in Characteristics

Depth to restrictive feature: Greater than 80 inches
Surface fragments: None
Seasonal high water table (depth): Greater than 6 feet

A or Ap horizon:
Hue—10YR
Value—4
Chroma—3 or 4
Texture—loam
Reaction—4.5 to 5.5
Organic matter content—0.5 to 3.0 percent

BE horizon (where present):
Hue—10YR
Value—5
Chroma—3 or 4
Texture—clay loam, sandy clay loam, loam
Reaction—pH 4.5 to 5.5
Organic matter content—0.0 to 0.5 percent

Bt horizon:
Hue—2.5YR to 7.5YR
Value—4 or 5
Chroma—6 or 8
Texture—gravelly clay loam, stony clay loam, gravelly sandy clay loam, cobbly clay
Reaction—pH 4.5 to 5.5
Organic matter content—0.0 to 0.5 percent

Apison Series

MLRA: 128
Map unit(s):
ApC—Apison-Sunlight complex, 5 to 12 percent slopes
ApF—Apison-Sunlight complex, 25 to 60 percent slopes, very rocky
Depth class: Moderately deep
Drainage class: Well drained
Saturated hydraulic conductivity (K_{sat}): Moderately high
Landform(s): Ridge on upland
Landform position(s) (three-dimensional): Crest and side slope
Parent material: Fine-loamy residuum weathered from interbedded sedimentary rock
Elevation: 730 to 1,400 feet
Slope: 5 to 60 percent
Associated soils: Sunlight and Coile
Climatic data:
Mean annual precipitation: 51 to 67 inches
Mean annual air temperature: 44 to 69 degrees F
Frost-free period: 183 to 247 days
Taxonomic class: Fine-loamy, siliceous, semiactive, thermic Typic Hapludults

Typical Pedon

Location in survey area: Apison loam in an area of Sunlight-Apison complex, 12 to 25 percent slopes, very rocky; in McMinn County; 6.3 miles east of Englewood on State Route 39 to Yoeder Branch, 250 feet south of State Route 39, on an upper slope in a mixed forest; USGS Mecca, Tennessee topographic quadrangle; latitude 35 degrees 21 minutes 51.00 seconds north and longitude 84 degrees 25 minutes 49.00 seconds west; NAD83. (Colors are for moist soil unless otherwise noted.)

A—0 to 8 centimeters (0.0 to 3.0 inches); brown (7.5YR 4/4) loam; moderate medium granular structure; friable; common fine and common medium roots; strongly acid, pH 5.5; clear wavy boundary.

BA—8 to 20 centimeters (3.0 to 8.0 inches); yellowish red (5YR 5/6) clay loam; common medium faint reddish brown (5YR 4/3) mottles; weak medium subangular blocky structure; friable; common fine and common medium roots; 5 percent shale channers; very strongly acid, pH 5.0; clear wavy boundary.

Bt—20 to 48 centimeters (8 to 19 inches); clay loam; moderate medium subangular blocky structure; friable; few fine and few medium roots; common faint clay films on all faces of peds; 10 percent shale channers; very strongly acid, pH 5.0; clear wavy boundary.

BC—48 to 56 centimeters (19 to 22.0 inches); strong brown (7.5YR 4/6) channery clay loam; many medium prominent brownish yellow (10YR 6/6) mottles; moderate medium platy structure; friable; few fine roots; 20 percent shale channers; very strongly acid, pH 5.0; abrupt smooth boundary.

Cr/C—56 to 107 centimeters (22.0 to 42.0 inches); olive yellow (2.5Y 6/6) soft sandy shale (Cr part); layers of brown (7.5YR 4/4) sandy loam with common medium prominent strong brown (7.5YR 5/8) mottles (C part); massive; friable; few fine roots; 2 percent shale channers; very strongly acid, pH 5.0; abrupt wavy boundary.

Cr—107 to 152 centimeters (42 to 60 inches); olive yellow sandy shale bedrock.

Range in Characteristics

Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Surface fragments: None
Seasonal high water table (depth): Greater than 6 feet

A horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 or 4
Texture—loam, silt loam
Reaction—4.5 to 5.5
Organic matter content—0.5 to 2.0 percent

BA horizon:
Hue—5YR to 10YR
Value—4 or 5
Chroma—3 to 6
Texture—clay loam, silty clay loam, loam
Reaction—pH 4.5 to 5.5
Organic matter content—0.5 to 2.0 percent

Bt horizon:
Hue—5YR to 10YR
Value—4 to 6
Chroma—4 to 8
Mottles (if they occur)—in shades of red, yellow, or brown
Texture—silty clay loam, loam, channery clay loam, clay loam

Reaction—pH 4.5 to 5.5
Organic matter content—0.0 to 0.5 percent

BC horizon:
Hue—5YR to 10YR
Value—4 to 6
Chroma—4 to 8
Mottles (if they occur)—in shades of red, yellow, or brown
Texture—clay loam, silty clay loam, loam
Organic matter content—0.0 to 0.5 percent

C horizon or Cr/C horizon (where present):
Hue—5YR to 10YR
Value—4 to 6
Chroma—4 to 8
Mottles (if they occur)—in shades of red, yellow, brown, or olive
Texture—sandy loam, clay loam, sandy clay loam, silt loam, silty clay loam, loam
Organic matter content—0.0 to 0.5 percent

Cr horizon:
Color—brown to olive yellow
Texture—soft sandy shale

Armuchee Series

MLRA: 128
Map unit(s):
AmC—Armuchee silt loam, 5 to 12 percent slopes
AmD—Armuchee silt loam, 12 to 20 percent slopes
AmE—Armuchee silt loam, 20 to 35 percent slopes
TuD—Townley-Armuchee-Urban land complex, 5 to 20 percent slopes
TuE—Townley-Armuchee-Urban land complex, 20 to 35 percent slopes
Depth class: Moderately deep
Drainage class: Well drained
Saturated hydraulic conductivity (K_{sat}): Moderately high
Landform(s): Ridge on upland
Landform position(s) (three-dimensional): Crest and side slope
Parent material: Clayey residuum weathered from acid shale
Elevation: 730 to 1,400 feet
Slope: 5 to 35 percent
Associated soils: Montevallo, Townley, Hamblen, and Capshaw
Climatic data:
Mean annual precipitation: 51 to 67 inches
Mean annual air temperature: 44 to 69 degrees F
Frost-free period: 183 to 247 days
Taxonomic class: Fine, mixed, semiactive, thermic Inceptic Hapludults

Typical Pedon

Location in survey area: Armuchee silt loam, 12 to 20 percent slopes; in Roane County; on Ledgerwood Drive, 0.5 mile from Eagle Furnace Road, 150 feet west; USGS Rockwood, Tennessee topographic quadrangle; latitude 35 degrees 47 minutes 03 seconds north and longitude 84 degrees 41 minutes 03 seconds west; UTM Zone 16, 706845 meters easting, 3962426 meters northing; NAD83. (Colors are for moist soil unless otherwise noted.)

A—0 to 8 centimeters (0.0 to 3.0 inches); brown (10YR 4/3) silt loam; weak fine

granular structure; very friable; common fine and common medium roots throughout; 10 percent shale channers; strongly acid, pH 5.1; abrupt smooth boundary.

BE—8 to 15 centimeters (3.0 to 6.0 inches); yellowish brown (10YR 5/4) channery silt loam; moderate medium granular structure; friable; common fine and common medium roots throughout; 15 percent shale channers; strongly acid, pH 5.1; clear smooth boundary.

Bt1—15 to 28 centimeters (6.0 to 11.0 inches); strong brown (7.5YR 5/6) channery silty clay loam; moderate medium subangular blocky structure; friable; common medium and common fine roots throughout; few discontinuous faint clay films on all faces of peds and on surfaces along pores; 20 percent shale channers; strongly acid, pH 5.1; gradual smooth boundary.

Bt2—28 to 38 centimeters (11.0 to 15.0 inches); strong brown (7.5YR 5/6) channery silty clay; moderate medium subangular blocky structure; firm; common medium roots throughout; common continuous faint clay films on all faces of peds and on surfaces along pores; 20 percent shale channers; strongly acid, pH 5.1; gradual smooth boundary.

C—38 to 53 centimeters (15.0 to 21.0 inches); strong brown (7.5YR 5/8) very channery silty clay; massive; firm; common medium prominent brownish yellow (10YR 6/6) and 11 percent medium prominent red (2.5YR 4/6) mottles; 40 percent shale channers; very strongly acid, pH 4.5; gradual wavy boundary.

Cr—53 to 63 centimeters (21.0 to 25.0 inches); weathered acid shale bedrock.

Range in Characteristics

Depth to restrictive feature: 20 to 36 inches to paralithic bedrock
Surface fragments: None
Seasonal high water table (depth): Greater than 6 feet

A or Ap horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—2 to 4
Texture—silt loam
Reaction—pH 4.5 to 5.5
Organic matter content—0.5 to 2.0 percent

BE horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 6
Texture—silt loam, silty clay loam
Reaction—pH 4.5 to 5.5
Organic matter content—0.0 to 0.5 percent

Bt horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—4 to 8
Texture—channery silty clay, channery silty clay loam
Reaction—4.5 to 5.5
Organic matter content—0.0 to 0.5 percent

C horizon:
Hue—7.5YR or 10YR
Value—5

Chroma—4 to 8
Mottles—brown, yellow, red, or gray
Texture—very channery silty clay, very channery silty clay loam
Reaction—4.5 to 5.5
Organic matter content—0.0 to 0.5 percent

Cr horizon:
Texture—weathered rippable shale bedrock

Bethesda Series

MLRA: 125
Map unit(s):
BeF—Bethesda-Mines pit complex, 10 to 80 percent slopes
Depth class: Very deep
Drainage class: Well drained
Saturated hydraulic conductivity (K_{sat}): Moderately high
Landform(s): Reclaimed land on mountains
Landform position(s) (three-dimensional): Mountain flank
Parent material: Coal extraction mine spoil derived from interbedded sedimentary rock
Elevation: 800 to 2,490 feet
Slope: 10 to 80 percent
Associated soils: Gilpin, Bouldin, and Petros
Climatic data:
Mean annual precipitation: 48 to 61 inches
Mean annual air temperature: 41 to 67 degrees F
Frost-free period: 163 to 214 days
Taxonomic class: Loamy-skeletal, mixed, active, acid, mesic Typic Udorthents

Typical Pedon

Location in survey area: Bethesda channery loam in an area of Bethesda-Mine pits complex, 10 to 80 percent slopes; in Cumberland County; 1.3 mile south of Grassy Cove Community on Highway 68, about 300 feet southwest of the road; USGS Grassy Cove, Tennessee topographic quadrangle; latitude 35 degrees 49 minutes 37.00 seconds north and longitude 84 degrees 54 minutes 14.00 seconds west; UTM Zone 16, 689343 meters easting, 3966782 meters northing; NAD83. (Colors are for moist soil unless otherwise noted.)

A—0 to 5 centimeters (0.0 to 2.0 inches); dark grayish brown (10YR 4/2) channery loam; weak medium granular structure; friable; 10 percent coal fragments and 10 percent shale channers less than 3 inches across; pH 4.0; clear smooth boundary.
C1—5 to 58 centimeters (2.0 to 23.0 inches); brown (10YR 4/3) very channery loam; massive; friable; 20 percent shale channers and 20 percent coal fragments less than 3 inches across; pH 4.0; gradual smooth boundary.
C2—58 to 97 centimeters (23.0 to 38.0 inches); dark yellowish brown (10YR 4/4) very channery clay loam; massive; friable; 20 percent shale channers and 20 percent coal fragments less than 3 inches across; pH 4.0; gradual smooth boundary.
C3—97 to 117 centimeters (38.0 to 46.0 inches); yellowish brown (10YR 5/4) very channery loam; massive; friable; 50 percent shale channers less than 3 inches across; pH 4.0; gradual smooth boundary.
C4—117 to 152 centimeters (46.0 to 60.0 inches); yellowish brown (10YR 5/4) cobbly loam; massive; friable; 25 percent sandstone cobbles as much as 6 inches across; pH 4.0.

Range in Characteristics

Depth to restrictive feature: Greater than 80 inches
Surface fragments: None
Seasonal high water table (depth): Greater than 6 feet

Ap horizon:
Hue—7.5YR or 10YR
Value—3 to 6
Chroma—2 to 6
Texture—channery loam
Reaction—3.6 to 5.5
Organic matter content—0.0 to 0.5 percent

C horizon:
Hue—7.5YR to 10YR
Value—3 to 6
Chroma—2 to 6
Texture—very channery clay loam, channery clay loam, very channery silty clay loam, cobbly loam, channery clay loam
Reaction—pH 3.6 to 5.5
Organic matter content—0.0 to 0.5 percent

Bloomingdale Series

MLRA: 128
Map unit(s):
Bg—Bloomingdale silty clay loam, occasionally flooded
Depth class: Very deep
Drainage class: Poorly drained
Saturated hydraulic conductivity (K_{sat}): Moderately high
Landform(s): Flood plain in valley
Parent material: Clayey alluvium derived from limestone and shale
Elevation: 710 to 910 feet
Slope: 0 to 2 percent
Associated soils: Colbert, Lyerly, Collegedale, Hamblen, Shady, and Capshaw
Climatic data:
Mean annual precipitation: 51 to 67 inches
Mean annual air temperature: 44 to 69 degrees F
Frost-free period: 183 to 247 days
Taxonomic class: Fine, mixed, semiactive, nonacid, thermic Fluvaquentic Endoaquepts

Typical Pedon

Location in survey area: Bloomingdale silty clay loam, occasionally flooded; in Roane County; on I-40 East to Lenoir City Exit, turn left onto White Wing Road, take left onto Buttermilk Road, take next right onto Old Walker Ferry Road, take first left onto Pawnook Farm Road, 0.4 mile then 50 feet north of the road on a floodplain along Papaw Creek; USGS Bethel Valley, Tennessee topographic quadrangle; latitude 35 degrees 53 minutes 40.30 seconds north and longitude 84 degrees 21 minutes 37.70 seconds west; UTM Zone 16, 738236 meters easting, 3975468 meters northing; NAD83. (Colors are for moist soil unless otherwise noted.)

Ap—0 to 13 centimeters (0.0 to 5.0 inches); dark grayish brown (10YR 4/2) silty clay loam; weak fine subangular blocky structure; friable; common fine and common

medium roots throughout; 6.0 fine prominent strong brown (7.5YR 5/6) masses of oxidized iron; neutral, pH 7.0; clear smooth boundary.

Bg—13 to 23 centimeters (5.0 to 9.0 inches); light grayish brown (10YR 6/2) silty clay loam; weak coarse subangular blocky structure; friable; common fine and common medium roots throughout; common fine pores; common medium prominent strong brown (7.5YR 5/6) masses of oxidized iron and common irregular iron-manganese concretions; 5 percent quartz pebbles; neutral, pH 7.0; clear smooth boundary.

Cg1—23 to 45 centimeters (9.0 to 17.0 inches); dark gray (2.5Y 4/1) silty clay; massive; firm; common fine and common medium roots throughout; common fine pores; common medium prominent dark yellowish brown (10YR 4/6) and common medium prominent yellowish red (5YR 5/6) masses of oxidized iron; common irregular iron-manganese concretions; 5 percent quartz pebbles; neutral, pH 7.0; diffuse smooth boundary.

Cg2—45 to 71 centimeters (17.0 to 28.0 inches); gray (10YR 5/1) silty clay; massive; firm; common fine and common medium pores; common medium distinct yellowish brown (10YR 5/6) and common medium prominent strong brown (7.5YR 5/6) masses of oxidized iron; common irregular iron-manganese concretions; 5 percent quartz pebbles; slightly acid, pH 6.0; diffuse smooth boundary.

Cg3—71 to 203 centimeters (28.0 to 80 inches); gray (N 5/0) silty clay; massive; firm; common irregular iron-manganese concretions; 6.0 medium prominent strong brown (7.5YR 5/6) and 6.0 medium prominent yellowish red (5YR 5/6) masses of oxidized iron; 5 percent quartz pebbles; slightly acid, pH 6.0.

Range in Characteristics

Depth to restrictive feature: Greater than 80 inches
Surface fragments: None
Seasonal high water table: January, February, March, April, May, November, December
Depth to top of water table: 0 to 12 inches

A or Ap horizon:
Hue—10YR
Value—4 or 5
Chroma—1 to 3
Texture—silty clay loam
Reaction—pH 5.5 to 8.5
Organic matter content—0.0 to 2.0 percent

Bg horizon:
Hue—10YR or 2.5Y
Value—5 or 6
Chroma—1 or 2
Texture—silty clay loam, silty clay, clay
Reaction—pH 5.5 to 8.5
Organic matter content—0.0 to 0.5 percent

Cg horizon:
Hue—10YR, 2.5Y, or neutral
Value—4 to 7
Chroma—0 or 1
Texture—silty clay, clay
Reaction—pH 5.5 to 8.5
Organic matter content—0.0 to 0.5 percent

Bouldin Series

MLRA: 125
Map unit(s):
GsF—Gilpin-Bouldin-Petros complex, 25 to 80 percent slopes, very stony
Depth class: Very deep
Drainage class: Well drained
Saturated hydraulic conductivity (K_{sat}): High
Landform(s): Mountain slope on mountains
Landform position(s) (three-dimensional): Mountain base and mountain flank (lower third)
Parent material: Loamy-skeletal colluvium derived from limestone, sandstone, and shale
Elevation: 800 to 2,490 feet
Slope: 30 to 75 percent
Associated soils: Petros, Gilpin, and Shelocta
Climatic data:
Mean annual precipitation: 48 to 61 inches
Mean annual air temperature: 41 to 67 degrees F
Frost-free period: 163 to 214 days
Taxonomic class: Loamy-skeletal, siliceous, subactive, mesic Typic Paleudults

Typical Pedon

Location in survey area: Bouldin flaggy loam in an area of Gilpin-Bouldin-Petros complex, 25 to 80 percent slopes, very stony; in Scott County; on a south-facing mountain slope along Capuchin Creek, 2,000 feet northeast of the intersection of Jellico Creek Road and Capuchin Creek Road, about 3 miles east of the community of Ketchen; USGS Ketchen, Tennessee topographic quadrangle; latitude 36 degrees 34 minutes 32.00 seconds north and longitude 84 degrees 16 minutes 38.00 seconds west; UTM Zone 16, 743629 meters easting, 4051240 meters northing; NAD83. (Colors are for moist soil unless otherwise noted.)

A—0 to 5 centimeters (0.0 to 2.0 inches); very dark grayish brown (10YR 3/2) flaggy loam; weak fine granular structure; very friable; common fine, common medium, and common coarse roots; 25 percent sandstone flagstones; strongly acid, pH 5.0; clear smooth boundary.

BE—5 to 43 centimeters (2.0 to 17.0 inches); yellowish brown (10YR 5/6) channery loam; weak fine subangular blocky structure; very friable; common fine, common medium, and common coarse roots; 30 percent sandstone channers; strongly acid, pH 5.0; clear smooth boundary.

Bt1—43 to 76 centimeters (17.0 to 30.0 inches); strong brown (7.5YR 5/6) very channery loam; weak medium subangular blocky structure; very friable; common fine and common medium roots; few discontinuous prominent clay films on all faces of peds; 50 sandstone channers; strongly acid, pH 5.0; gradual smooth boundary.

Bt2—76 to 107 centimeters (30.0 to 42.0 inches); strong brown (7.5YR 4/6) extremely flaggy clay loam; weak medium subangular blocky structure; friable; few continuous prominent clay films on all faces of peds; 65 percent sandstone flagstones; strongly acid, pH 5.0; gradual smooth boundary.

Bt3—107 to 203 centimeters (42.0 to 80.0 inches); yellowish red (5YR 4/6) extremely stony clay loam; 21 percent fine prominent brownish yellow (10YR 6/6) mottles; weak medium subangular blocky structure; firm; 24 percent continuous prominent clay films on all faces of peds; 65 percent sandstone stones; strongly acid, pH 5.0.

Range in Characteristics

Depth to restrictive feature: Greater than 80 inches
Surface fragments: 1 to 3 percent subrounded indurated sandstone, unspecified stones
Seasonal high water table (depth): Greater than 6 feet

A horizon:
Hue—10YR
Value—3 or 4
Chroma—2 or 3
Texture—stony loam, flaggy loam
Reaction—pH 4.5 to 5.5
Organic matter content—1.0 to 3.0 percent

BE horizon:
Hue—10YR
Value—4 or 5
Chroma—3 or 4
Texture—very channery fine sandy loam, channery loam, extremely channery fine sandy loam, very channery loam, extremely channery loam, channery fine sandy loam
Reaction—pH 4.5 to 5.5
Organic matter content—0.5 to 2.0 percent

Bt horizon:
Hue—10YR or 7.5YR
Value—4 or 5
Chroma—4 to 6
Texture—extremely channery fine sandy loam, channery loam, channery fine sandy loam, very channery fine sandy loam, extremely channery loam, very channery loam, very flaggy loam, flaggy loam, very flaggy clay loam, extremely flaggy loam, extremely channery clay loam, very channery clay loam, extremely flaggy clay loam
Fragment content—36 to 58 percent
Reaction—pH 4.5 to 5.5
Organic matter content—0.5 to 2.0 percent

BC horizon (where present):
Hue—10YR or 7.5YR
Value—5 or 6
Chroma—3 to 6
Mottles—lithochromic mottles in shades of brown, red, or gray
Texture—same as the Bt horizon
Reaction—pH 4.5 to 5.5
Organic matter content—0.5 to 2.0 percent

Bradyville Series

MLRA: 128
Map unit(s):
BrE—Bradyville-Rock outcrop complex, 5 to 25 percent slopes
Depth class: Deep
Drainage class: Well drained
Saturated hydraulic conductivity (K_{sat}): Moderately high
Landform(s): Ridge on upland

Landform position(s) (three-dimensional): Side slope
Parent material: Clayey residuum weathered from limestone and dolomite
Elevation: 730 to 1,400 feet
Slope: 5 to 25 percent
Associated soils: Dewey, Fullerton, Pailo, and Waynesboro
Climatic data:
Mean annual precipitation: 51 to 67 inches
Mean annual air temperature: 44 to 69 degrees F
Frost-free period: 183 to 247 days
Taxonomic class: Fine, mixed, semiactive, thermic Typic Hapludalfs

Typical Pedon

Location in survey area: Bradyville gravelly silt loam in an area of Bradyville-Rock outcrop complex, 25 to 50 percent slopes; in McMinn County; 3.7 miles west on State Route 30 from its intersection with U.S. Highway 11, about 1.9 miles south on County Road 110, about 1 mile west on County Road 107, about 400 feet north in a mixed hardwood forest; USGS Riceville, Tennessee topographic quadrangle; latitude 35 degrees 27 minutes 26.00 seconds north and longitude 84 degrees 42 minutes 47.00 seconds west; NAD83. (Colors are for moist soil unless otherwise noted.)

Oi—1 centimeter to 0 (0.5 inch to 0.0); leaf litter and twigs; friable.
A—0 to 18 centimeters (0.0 to 7.0 inches); dark yellowish brown (10YR 4/4) broken face gravelly silt loam; weak fine subangular blocky structure; friable; common fine and common medium roots throughout; 25 percent angular chert pebbles; strongly acid, pH 5.0; abrupt smooth boundary.
Bt1—18 to 51 centimeters (7.0 to 20.0 inches); strong brown (7.5YR 5/6) broken face clay; 10 percent medium faint spherical yellowish brown (10YR 5/6) mottles; moderate medium subangular blocky structure; friable; common fine and common medium roots throughout; common discontinuous distinct clay films on surfaces along pores and common discontinuous distinct clay films on all faces of peds; 10 percent angular chert pebbles; strongly acid, pH 5.0; clear smooth boundary.
Bt2—51 to 69 centimeters (20.0 to 27.0 inches); yellowish red (5YR 5/6) broken face clay; moderate fine subangular blocky structure; firm; common fine roots throughout; common discontinuous distinct clay films on surfaces along pores and common discontinuous distinct clay films on all faces of peds; 10 percent angular chert pebbles and cobbles; moderately acid, pH 5.5; clear smooth boundary.
Bt3—69 to 112 centimeters (27.0 to 44.0 inches); yellowish red (5YR 5/8) broken face clay; moderate medium subangular blocky structure; firm; few fine roots throughout; common discontinuous distinct clay films on all faces of peds and common discontinuous distinct clay films on surfaces along pores; 10 percent angular chert pebbles; slightly acid, pH 6.0; abrupt smooth boundary.
R—112 to 114 centimeters (44.0 inches); hard limestone bedrock.

Range in Characteristics

Depth to restrictive feature: 40 to 60 inches to lithic bedrock
Surface fragments: None
Seasonal high water table (depth): Greater than 6 feet

A or Ap horizon:
Hue—7.5YR to 10YR
Value—3 or 4
Chroma—3 or 4
Texture—gravelly silt loam
Reaction—pH 5.0 to 5.5
Organic matter content—0.5 to 2.0 percent

Bt horizon:
Hue—2.5YR to 7.5YR
Value—4 or 5
Chroma—4 to 8
Texture—silty clay, clay
Mottles—in shades of yellow, brown, or red
Reaction—pH 5.0 to 7.0
Organic matter content—0.0 to 0.5 percent

R horizon:
Color—gray
Texture—hard limestone bedrock

Capshaw Series

MLRA: 128
Map unit(s):
CaB—Capshaw silt loam, 2 to 5 percent slopes
Depth class: Very deep
Drainage class: Moderately well drained
Saturated hydraulic conductivity (K_{sat}): Moderately low
Landform(s): Stream terrace in valley
Parent material: Clayey alluvium over clayey residuum weathered from limestone and shale
Elevation: 710 to 910 feet
Slope: 2 to 5 percent
Associated soils: Armuchee, Townley, Montevallo, Colbert, Lyerly, Collegedale, and Bloomingdale
Climatic data:
Mean annual precipitation: 51 to 67 inches
Mean annual air temperature: 44 to 69 degrees F
Frost-free period: 183 to 247 days
Taxonomic class: Fine, mixed, semiactive, thermic Oxyaquic Hapludalfs

Typical Pedon

Location in survey area: Capshaw silt loam, 2 to 5 percent slopes; in Roane County; 0.1 mile north from the intersection of Dyllis Road and Old Harriman Highway on Old Harriman Highway, 100 feet east of the road; USGS Elverton, Tennessee topographic quadrangle; latitude 35 degrees 57 minutes 30.00 seconds north and longitude 84 degrees 25 minutes 36.00 seconds west; UTM Zone 16, 732075 meters easting, 3982388 meters northing; NAD83. (Colors are for moist soil unless otherwise noted.)

Ap—0 to 10 centimeters (0.0 to 4.0 inches); brown (10YR 4/3) silt loam; weak medium granular structure; friable; common fine and common medium roots throughout; neutral, pH 7.0; clear smooth boundary.
BE—10 to 23 centimeters (4.0 to 9.0 inches); brown (10YR 5/3) silty clay loam; weak fine subangular blocky structure; friable; common fine and common medium roots throughout; common medium tubular pores; very slightly acid, pH 6.5; gradual smooth boundary.
Bt1—23 to 61 centimeters (9.0 to 24.0 inches); brownish yellow (10YR 6/6) silty clay loam; weak medium subangular blocky structure; firm; common fine and common medium roots throughout; common distinct yellowish brown (10YR 5/4) clay films on all faces of peds; common medium distinct pale brown (10YR 6/3) iron depletions, common medium distinct strong brown (7.5YR 5/8) masses of oxidized iron, and common medium very strongly cemented black (10YR 2/1) iron-

manganese concretions throughout; slightly acid, pH 6.0; diffuse smooth boundary.

Bt2—61 to 91 centimeters (24.0 to 36.0 inches); brownish yellow (10YR 6/6) clay; weak medium subangular blocky structure; firm; common fine tubular pores; common distinct yellowish brown (10YR 5/4) clay films on all faces of peds; common medium distinct light brownish gray (10YR 6/2) iron depletions, common medium very strongly cemented black (10YR 2/1) iron-manganese concretions throughout, and common medium distinct strong brown (7.5YR 5/8) masses of oxidized iron; slightly acid, pH 6.0; diffuse smooth boundary.

Bt3—91 to 135 centimeters (36.0 to 53.0 inches); brownish yellow (10YR 6/6) silty clay; weak medium angular blocky structure; firm; common fine tubular pores; many distinct yellowish brown (10YR 5/4) clay films on all faces of peds; common medium very strongly cemented black (10YR 2/1) iron-manganese concretions throughout; slightly acid, pH 6.0; diffuse smooth boundary.

BC—135 to 183 centimeters (53.0 to 72.0 inches); brownish yellow (10YR 6/6) silty clay; weak coarse angular blocky structure; firm; common medium distinct light brownish gray (10YR 6/2) iron depletions, common medium distinct strong brown (7.5YR 5/8) masses of oxidized iron, and common medium and coarse very strongly cemented black (10YR 2/1) iron-manganese concretions throughout; slightly acid, pH 6.0; diffuse wavy boundary.

Cr—183 to 193 centimeters (72.0 to 76.0 inches); interbedded limestone and shale bedrock.

Range in Characteristics

Depth to restrictive feature: 71 to 76 inches to paralithic bedrock
Surface fragments: None
Seasonal high water table: January, February, March, December
Depth to top of water table: 24 to 42 inches

A or Ap horizon:
Hue—10YR
Value—4 or 5
Chroma—2 to 4
Texture—silt loam
Reaction—pH 5.1 to 6.0
Organic matter content—1.0 to 3.0 percent

BE horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—3 to 8
Texture—silty clay loam, silty clay, silt loam
Reaction—pH 5.1 to 6.0
Organic matter content—0.0 to 0.5 percent

Bt horizon:
Hue—7.5YR to 2.5Y
Value—4 to 6
Chroma—4 to 8
Texture—clay, silty clay, silty clay loam
Reaction—pH 5.1 to 6.0
Organic matter content—0.0 to 0.5 percent

BC or C horizon (where present):
Hue—10YR
Value—5 or 6

Chroma—4 to 8
Texture—silty clay loam, silty clay, clay
Reaction—pH 5.0 to 6.5
Organic matter content—0.0 to 0.5 percent

Cg horizon (where present):
Hue—neutral, 10YR, or 2.5Y
Value—4 to 6
Chroma—0 to 2
Texture—silty clay, clay
Reaction—pH 5.0 to 6.5
Organic matter content—0.0 to 0.5 percent

Cr horizon:
Texture—weathered interbedded shale and limestone bedrock

Coile Series

MLRA: 128
Map unit(s):
AcF—Apison-Coile complex, 25 to 60 percent slopes
CnC2—Coile silt loam, 5 to 12 percent slopes, eroded
CnD2—Coile silt loam, 12 to 25 percent slopes, eroded
CnE3—Coile silt loam, 5 to 35 percent slopes, gullied
TwB2—Townley-Coile complex, 2 to 5 percent slopes, eroded
Depth class: Very shallow and shallow
Drainage class: Well drained
Saturated hydraulic conductivity (K_{sat}): Moderately high
Landform(s): Hill in river valley
Landform position(s) (three-dimensional): Crest and side slope
Parent material: Loamy-skeletal residuum weathered from acid shale
Elevation: 500 to 1,000 feet
Slope: 2 to 60 percent
Associated soils: Corryton, Apison, and Townley
Climatic data:
Mean annual precipitation: 44 to 65 inches
Mean annual air temperature: 45 to 69 degrees F
Frost-free period: 171 to 209 days
Taxonomic class: Loamy-skeletal, mixed, semiactive, thermic, shallow Ruptic-Ultic Dystrudepts

Typical Pedon

Location in survey area: Coile silt loam, 5 to 12 percent slopes, eroded; in McMinn County; 2.7 miles south of the intersection of State Route 30 and U.S. Highway 11, about 1.9 miles west on County Road 114 (Coile Road), 875 feet due north of a rest area along Interstate 75, in a pastured area; USGS Riceville, Tennessee topographic quadrangle; latitude 35 degrees 25 minutes 57.00 seconds north and longitude 84 degrees 41 minutes 16.00 seconds west; NAD83. (Colors are for moist soil unless otherwise noted.)

A—0 to 8 centimeters (0.0 to 3.0 inches); brown (10YR 4/3) silt loam; weak fine granular structure; very friable; common fine roots throughout; 10 percent flat subangular strongly cemented 2- to 76-millimeter acid shale fragments; neutral, pH 7.0; abrupt smooth boundary.
Bw/Bt—8 to 25 centimeters (3.0 to 10.0 inches); 60 percent dark yellowish brown

(10YR 4/6) and 40 percent strong brown (7.5YR 5/6) very channery silt loam (Bw part); weak fine subangular blocky structure; friable; few fine roots; 58 percent shale channers with common prominent coatings of manganese; strongly acid; 40 percent strong brown (7.5YR 5/6) channery clay (Bt part); common medium prominent light yellowish brown (2.5Y 6/4) mottles; friable; common fine roots; 30 percent shale channers with common prominent coatings of manganese; moderately acid; gradual wavy boundary.

C—25 to 43 centimeters (10.0 to 18.0 inches); strong brown (7.5YR 5/6) channery clay; many medium prominent light yellowish brown (2.5Y 6/4) relict mottles from olive shale; massive; friable; few fine and few very fine roots; common coarse prominent very dark brown (10YR 2/2) manganese masses; 20 percent shale channers; strongly acid, pH 5.0; abrupt irregular boundary.

Cr—43 to 61 centimeters (18.0 to 24.0 inches); shale bedrock.

Range in Characteristics

Depth to restrictive feature: 9 to 20 inches to paralithic bedrock
Surface fragments: None
Seasonal high water table (depth): Greater than 6 feet

Ap horizon:
Hue—7.5YR to 10YR
Value—4 or 5
Chroma—3 or 4
Texture—loam, silt loam
Reaction—pH 4.5 to 6.0
Organic matter content—0.5 to 2.0 percent

Bw/Bt horizon:
Hue—7.5YR to 2.5Y
Value—4 or 5
Chroma—4 to 6
Texture—channery loam, very channery silt loam, channery clay
Reaction—pH 4.5 to 6.0
Organic matter content—0.1 to 0.5 percent

C horizon(s):
Hue—5YR to 2.5Y
Value—3 to 6
Chroma—3 to 8
Texture—very channery loam, very channery clay loam, channery clay
Reaction—pH 4.5 to 6.0
Organic matter content—0.1 to 0.5 percent

Cr horizon:
Color—brown to olive
Texture—tilted, soft acid shale bedrock

Colbert Series

MLRA: 128
Map unit(s):
CbD—Colbert-Lyerly-Rock outcrop complex, 5 to 20 percent slopes
Depth class: Deep and very deep
Drainage class: Moderately well drained
Saturated hydraulic conductivity (K_{sat}): Moderately low
Landform(s): Hillslope on upland

Landform position(s) (three-dimensional): Side slope
Parent material: Clayey residuum weathered from argillaceous or shaly limestone
Elevation: 730 to 1,400 feet
Slope: 5 to 20 percent
Associated soils: Lyerly, Collegedale, Capshaw, and Bloomingdale
Climatic data:
  Mean annual precipitation: 51 to 67 inches
  Mean annual air temperature: 44 to 69 degrees F
  Frost-free period: 183 to 247 days
Taxonomic class: Fine, smectitic, thermic Vertic Hapludalfs

Typical Pedon

Location in survey area: Colbert silt loam in an area of Colbert-Lyerly-Rock outcrop complex, 5 to 20 percent slopes; in Roane County; from Kingston south on Highway 58, approximately 9 miles south and 0.5 mile southeast of the highway; USGS Pattie Gap, Tennessee topographic quadrangle; latitude 35 degrees 44 minutes 48.00 seconds north and longitude 84 degrees 36 minutes 47.00 seconds west; UTM Zone 16, 715836 meters easting, 3958478 meters northing; NAD83. (Colors are for moist soil unless otherwise noted.)

Ap—0 to 13 centimeters (0.0 to 5.0 inches); brown (10YR 4/3) silt loam; moderate medium granular structure; very friable; many fine and many medium roots throughout; moderately acid, pH 5.5; clear smooth boundary.

BE—13 to 23 centimeters (5.0 to 9.0 inches); yellowish brown (10YR 5/4) silt loam; weak fine subangular blocky structure; very friable; many fine and common medium roots throughout; moderately acid, pH 5.5; clear smooth boundary.

Bt1—23 to 58 centimeters (9.0 to 23.0 inches); strong brown (7.5YR 5/6) clay; moderate medium angular blocky structure; firm; common fine and common medium roots throughout; common discontinuous distinct clay films on all faces of peds; few medium strongly cemented manganese masses throughout; slightly acid, pH 6.0; diffuse smooth boundary.

Bt2—58 to 122 centimeters (23.0 to 48.0 inches); brownish yellow (10YR 6/8) clay; weak coarse angular blocky structure; firm; many discontinuous distinct clay films on all faces of peds; few medium strongly cemented manganese masses throughout; common medium distinct light brownish gray (10YR 6/2) and common medium distinct light yellowish brown (10YR 6/4) iron depletions; slightly acid, pH 6.0; diffuse smooth boundary.

BC—122 to 147 centimeters (48.0 to 58.0 inches); olive yellow (2.5Y 6/6) clay; weak very coarse angular blocky structure; friable; common medium prominent light gray (10YR 7/2) and common medium prominent brownish yellow (10YR 6/8) iron depletions; many coarse strongly cemented manganese masses throughout; slightly acid, pH 6.0; abrupt smooth boundary.

R—147 to 157 centimeters (58.0 to 62.0 inches); limestone bedrock.

Range in Characteristics

Depth to restrictive feature: 40 to 72 inches to lithic bedrock
Surface fragments: None
Seasonal high water table: January, February, March, December
Depth to top of water table: 42 to 60 inches

A or Ap horizon:
  Hue—10YR
  Value—3 to 5
  Chroma—3 or 4
  Texture—silt loam

Reaction—pH 4.5 to 6.5
Organic matter content—0.5 to 2.0 percent

BE horizon (where present):
Hue—10YR
Value—5 or 6
Chroma—4 or 6
Texture—silt loam, silty clay loam
Reaction—pH 4.5 to 6.5
Organic matter content—0.5 to 2.0 percent

Bt horizon:
Hue—7.5YR to 2.5Y
Value—4 to 6
Chroma—2 to 8
Texture—silty clay, clay
Reaction—pH 4.5 to 6.5
Organic matter content—0.0 to 0.5 percent

BC horizon (where present):
Hue—7.5YR to 5Y
Value—5 or 6
Chroma—2 to 8
Texture—silty clay, clay
Reaction—pH 6.0 to 8.0
Organic matter content—0.0 to 0.5 percent

R horizon:
Texture—unweathered limestone bedrock

Collegedale Series

MLRA: 128
Map unit(s):
CoC—Collegedale silt loam, 5 to 12 percent slopes
CoD—Collegedale silt loam, 12 to 20 percent slopes
Depth class: Very deep
Drainage class: Well drained
Saturated hydraulic conductivity (K_{sat}): Moderately high
Landform(s): Ridge on upland
Landform position(s) (three-dimensional): Crest and side slope
Parent material: Clayey residuum weathered from limestone and shale
Elevation: 730 to 1,400 feet
Slope: 5 to 20 percent
Associated soils: Colbert, Lyerly, Capshaw, and Dewey
Climatic data:
Mean annual precipitation: 51 to 67 inches
Mean annual air temperature: 44 to 69 degrees F
Frost-free period: 183 to 247 days
Taxonomic class: Fine, mixed, semiactive, thermic Typic Paleudults

Typical Pedon

Location in survey area: Collegedale silt loam, 12 to 20 percent slopes; in Roane County; from Kingston south on Tennessee State Highway 58 approximately 9 miles, then approximately 0.8 mile southeast of the highway; USGS Pattie Gap, Tennessee topographic quadrangle; latitude 35 degrees 43 minutes 44.00 seconds north and

longitude 84 degrees 36 minutes 49.80 seconds west; UTM Zone 16, 715828 meters easting, 3957738 meters northing; NAD83. (Colors are for moist soil unless otherwise noted.)

Ap—0 to 13 centimeters (0.0 to 5.0 inches); brown (10YR 4/3) silt loam; weak medium granular structure; friable; many fine and many medium roots throughout; strongly acid, pH 5.0; clear smooth boundary.

Bt1—13 to 38 centimeters (5.0 to 15.0 inches); yellowish red (5YR 4/6) clay; weak medium subangular blocky structure; firm; common fine and common medium roots throughout; very strongly acid, pH 4.5; diffuse smooth boundary.

Bt2—38 to 89 centimeters (15.0 to 35.0 inches); yellowish red (5YR 5/6) clay; 1 percent medium prominent olive yellow (2.5Y 6/6) mottles; moderate medium subangular blocky structure; firm; common fine roots throughout; common discontinuous distinct clay films on all faces of peds; very strongly acid, pH 4.5; diffuse smooth boundary.

Bt3—89 to 119 centimeters (35.0 to 47.0 inches); yellowish red (5YR 5/8) clay; common medium distinct strong brown (7.5YR 5/6), common medium distinct olive yellow (2.5Y 6/6), and common medium distinct light yellowish brown (2.5Y 6/4) mottles; moderate medium angular blocky structure; very firm; common discontinuous distinct clay films on all faces of peds; 5 percent chert gravel; very strongly acid, pH 4.5; diffuse smooth boundary.

Bt4—119 to 203 centimeters (47.0 to 80.0 inches); yellowish red (5YR 5/8) clay; common fine prominent light brownish gray (10YR 6/2), common fine prominent light yellowish brown (10YR 6/4), and common medium distinct strong brown (7.5YR 5/6) mottles; moderate medium angular blocky structure; very firm; common discontinuous distinct clay films on all faces of peds; 10 percent chert gravel; very strongly acid, pH 4.5.

Range in Characteristics

Depth to restrictive feature: Greater than 80 inches
Surface fragments: None
Seasonal high water table (depth): Greater than 6 feet

A or Ap horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 or 4
Texture—silt loam
Reaction—pH 4.0 to 5.5
Organic matter content—1.0 to 2.0 percent

BE horizon (where present):
Hue—7.5YR or 10YR
Value—5
Chroma—4 or 6
Texture—silt loam, silty clay loam
Reaction—pH 4.0 to 5.5
Organic matter content—1.0 to 2.0 percent

Bt horizon:
Hue—2.5YR to 2.5Y
Value—4 to 6
Chroma—6 or 8
Texture—clay, silty clay
Reaction—pH 4.0 to 5.5
Organic matter content—0.0 to 0.5 percent

Craigsville Series

MLRA: 125
Map unit(s):
EcB—Ealy-Craigsville complex, rarely flooded
Depth class: Very deep
Drainage class: Well drained
Saturated hydraulic conductivity (K_{sat}): High
Landform(s): Flood plain in valley
Parent material: Loamy-skeletal alluvium derived from sandstone
Elevation: 800 to 2,490 feet
Slope: 0 to 5 percent
Associated soils: Ealy, Pope, and Philo
Climatic data:
Mean annual precipitation: 48 to 61 inches
Mean annual air temperature: 41 to 67 degrees F
Frost-free period: 163 to 214 days
Taxonomic class: Loamy-skeletal, mixed, superactive, mesic Fluventic Dystrudepts

Typical Pedon

Location in survey area: Craigsville cobbly sandy loam in an area of Ealy-Craigsville complex, 0 to 5 percent slopes, occasionally flooded; in Cumberland County; 0.5 mile east of Potters Ford Road, 300 feet west of the confluence of Underwood Branch and the Obed River; latitude 36 degrees 5 minutes 25.50 seconds north and longitude 84 degrees 48 minutes 23.50 seconds west; NAD83. (Colors are for moist soil unless otherwise noted.)

A—0 to 8 centimeters (0.0 to 3.0 inches); dark brown (10YR 3/3) cobbly sandy loam; weak fine granular structure; very friable; common fine, common medium, and common coarse roots throughout; 30 percent sandstone gravel and cobbles; moderately acid, pH 5.5; clear smooth boundary.

AB—8 to 23 centimeters (3.0 to 9.0 inches); brown (10YR 4/3) cobbly sandy loam; weak fine granular structure; friable; common fine, common medium, and common coarse roots throughout; 30 percent sandstone gravel and cobbles; strongly acid, pH 5.0; clear smooth boundary.

Bw—23 to 53 centimeters (9.0 to 21.0 inches); dark yellowish brown (10YR 4/4) very cobbly sandy loam; weak medium subangular blocky structure; friable; common fine and common medium roots throughout; 45 percent sandstone gravel and cobbles; strongly acid, pH 5.0; gradual smooth boundary.

C1—53 to 86 centimeters (21.0 to 34.0 inches); dark yellowish brown (10YR 4/4) extremely cobbly loamy sand; single grain; loose; common fine roots throughout; 70 percent sandstone gravel and cobbles; strongly acid, pH 5.0; gradual smooth boundary.

C2—86 to 152 centimeters (34.0 to 60.0 inches); yellowish brown (10YR 5/4) extremely cobbly loamy sand; single grain; loose; 70 percent sandstone gravel and cobbles; strongly acid, pH 5.0.

Range in Characteristics

Depth to restrictive feature: Greater than 80 inches
Surface fragments: None
Seasonal high water table: December
Depth to top of water table: 60 to 72 inches

A horizon:
Hue—10YR

Value—3 or 4
Chroma—2 to 4
Texture—cobbly fine sandy loam
Reaction—pH 4.5 to 5.5
Organic matter content—1.0 to 3.0 percent

AB horizon (where present):
Hue—7.5YR to 10YR
Value—3 to 5
Chroma—2 to 4
Texture—cobbly sandy loam, cobbly fine sandy loam
Reaction—pH 4.5 to 5.5
Organic matter content—1.0 to 3.0 percent

Bw horizon:
Hue—10YR
Value—4 or 5
Chroma—4 or 6
Texture—gravelly sandy loam, very cobbly sandy loam, cobbly loam
Reaction—pH 4.5 to 5.5
Organic matter content—0.0 to 0.5 percent

C horizon:
Hue—10YR
Value—4 or 5
Chroma—3 to 6
Texture—extremely cobbly loamy sand, very gravelly sandy loam, very cobbly sandy loam
Reaction—pH 4.5 to 5.5
Organic matter content—0.0 to 0.5 percent

Dewey Series

MLRA: 128
Map unit(s):
DeB—Dewey silt loam, 2 to 5 percent slopes
DeC—Dewey silt loam, 5 to 12 percent slopes
DeD—Dewey silt loam, 12 to 20 percent slopes
DeE—Dewey silt loam, 20 to 45 percent slopes
FwD—Fullerton-Dewey-Urban land complex, 5 to 20 percent slopes
FwE—Fullerton-Dewey-Urban land complex, 20 to 35 percent slopes
Depth class: Very deep
Drainage class: Well drained
Saturated hydraulic conductivity (K_{sat}): Moderately high
Landform(s): Ridge on upland
Landform position(s) (three-dimensional): Crest and side slope
Parent material: Clayey residuum weathered from limestone or alluvium over residuum weathered from limestone
Elevation: 730 to 1,400 feet
Slope: 2 to 45 percent
Associated soils: Fullerton, Waynesboro, Etowah, and Minvale
Climatic data:
Mean annual precipitation: 51 to 67 inches
Mean annual air temperature: 44 to 69 degrees F
Frost-free period: 183 to 247 days
Taxonomic class: Fine, kaolinitic, thermic Typic Paleudults

Typical Pedon

Location in survey area: Dewey silt loam, 5 to 12 percent slopes; in Roane County; on Poplar Creek Road, 1 mile north of Blair Road, 75 yards north of the road; USGS Elverton, Tennessee topographic quadrangle; latitude 35 degrees 58 minutes 5.00 seconds north and longitude 84 degrees 23 minutes 26.00 seconds west; UTM Zone 16, 735282 meters easting, 3983555 meters northing; NAD83. (Colors are for moist soil unless otherwise noted.)

Ap—0 to 18 centimeters (0.0 to 7.0 inches); dark yellowish brown (10YR 4/4) silt loam; moderate medium granular structure; very friable; many fine and many medium roots throughout; slightly acid, pH 6.0; clear smooth boundary.

Bt1—18 to 69 centimeters (7.0 to 27.0 inches); yellowish red (5YR 5/8) silty clay loam; weak medium subangular blocky structure; friable; common fine and common medium roots throughout; few faint clay films on all faces of peds; slightly acid, pH 6.0; gradual smooth boundary.

Bt2—69 to 99 centimeters (27.0 to 39.0 inches); red (2.5YR 4/8) silty clay; moderate medium subangular blocky structure; friable; common fine roots throughout; common continuous faint clay films on all faces of peds; strongly acid, pH 5.0; gradual smooth boundary.

Bt3—99 to 122 centimeters (39.0 to 48.0 inches); red (2.5YR 4/8) silty clay; moderate medium subangular blocky structure; firm; common continuous distinct clay films on all faces of peds; strongly acid, pH 5.0; gradual smooth boundary.

Bt4—122 to 152 centimeters (48.0 to 60 inches); dark red (2.5YR 3/6) silty clay; 13 percent medium prominent brownish yellow (10YR 6/6) mottles; moderate medium angular blocky and subangular blocky structure; friable; many continuous distinct clay films on all faces of peds; strongly acid, pH 5.0.

Range in Characteristics

Depth to restrictive feature: Greater than 80 inches
Surface fragments: None
Seasonal high water table (depth): Greater than 6 feet

Ap or A horizon:
Hue—5YR to 10YR
Value—3 or 4
Chroma—3 to 6
Texture—silt loam
Reaction—pH 4.5 to 6.0
Organic matter content—0.5 to 2.0 percent

BA horizon (where present):
Hue—5YR to 10YR
Value—4 or 5
Chroma—3 to 6
Texture—silt loam, silty clay loam
Reaction—pH 4.5 to 6.0
Organic matter content—0.0 to 0.5 percent

Bt horizon:
Hue—10R to 5YR
Value—3 to 5
Chroma—6 or 8
Mottles—in some pedons; brown, yellow, or red
Texture—clay, silty clay; the upper part includes silty clay loam
Reaction—pH 4.5 to 5.5
Organic matter content—0.0 to 0.5 percent

Ealy Series

MLRA: 125
Map unit(s):
EcB—Ealy-Craigsville complex, rarely flooded
Depth class: Very deep
Drainage class: Well drained
Saturated hydraulic conductivity (K_{sat}): High
Landform(s): Flood plain in valley
Parent material: Coarse-loamy alluvium derived from sandstone
Elevation: 800 to 2,490 feet
Slope: 0 to 3 percent
Associated soils: Craigsville, Pope, and Philo
Climatic data:
Mean annual precipitation: 48 to 61 inches
Mean annual air temperature: 41 to 67 degrees F
Frost-free period: 163 to 214 days
Taxonomic class: Coarse-loamy, siliceous, semiactive, mesic Fluventic Dystrudepts

Typical Pedon

Location in survey area: Ealy fine sandy loam in an area of Ealy-Craigsville complex, 0 to 5 percent slopes, occasionally flooded; in Cumberland County; in Catoosa Wildlife Management Area, 100 feet northwest of the junction of Elmore Creek and the Obed River; latitude 36 degrees 4 minutes 27.70 seconds north and longitude 84 degrees 53 minutes 51.00 seconds west; NAD83. (Colors are for moist soil unless otherwise noted.)

A—0 to 8 centimeters (0.0 to 3.0 inches); brown (10YR 4/3) fine sandy loam; weak fine granular structure; very friable; many fine and many medium roots; strongly acid, pH 5.0; abrupt smooth boundary.
BA—8 to 25 centimeters (3.0 to 10.0 inches); dark yellowish brown (10YR 4/4) fine sandy loam; common medium and coarse faint yellowish brown (10YR 5/4) mottles; weak coarse granular structure; very friable; many fine, many medium, and many coarse roots; strongly acid, pH 5.0; clear smooth boundary.
Bw—25 to 99 centimeters (10.0 to 39.0 inches); dark yellowish brown (10YR 4/6) fine sandy loam; weak coarse subangular blocky structure; very friable; common fine and common medium roots; strongly acid, pH 5.0; gradual smooth boundary.
C1—99 to 127 centimeters (39.0 to 50.0 inches); dark yellowish brown (10YR 4/4) loam; weak medium subangular blocky structure; friable; common fine and common medium roots; strongly acid, pH 5.0; gradual smooth boundary.
C2—127 to 152 centimeters (50.0 to 60.0 inches); dark yellowish brown (10YR 4/4) fine sandy loam; massive; very friable; common fine and common medium roots; strongly acid, pH 5.0.

Range in Characteristics

Depth to restrictive feature: Greater than 80 inches
Surface fragments: None
Seasonal high water table: January, February, March, December
Depth to top of water table: 60 to 72 inches

A or Ap horizon:
Hue—10YR
Value—4 or 5
Chroma—2 to 4
Texture—fine sandy loam

Reaction—pH 4.5 to 5.5
Organic matter content—1.0 to 3.0 percent

BA horizon (where present):
Hue—10YR or 7.5YR
Value—4 or 5
Chroma—2 to 6
Texture—loam, fine sandy loam
Reaction—pH 4.5 to 5.5
Organic matter content—1.0 to 3.0 percent

Bw horizon:
Hue—10YR or 7.5YR
Value—4 or 5
Chroma—3 to 6
Texture—loam, fine sandy loam
Reaction—pH 4.5 to 5.5
Organic matter content—1.0 to 3.0 percent

C horizon:
Hue—10YR
Value—4 or 6
Chroma—2 to 4
Texture—loam, fine sandy loam, loamy fine sand
Reaction—pH 4.5 to 5.5
Organic matter content—0.5 to 1.0 percent

Etowah Series

MLRA: 128
Map unit(s):
EtB—Etowah loam, 2 to 5 percent slopes
EtC—Etowah silt loam, 5 to 12 percent slopes
WeD—Waynesboro-Etowah-Urban land complex, 5 to 20 percent slopes
Depth class: Very deep
Drainage class: Well drained
Saturated hydraulic conductivity (K_{sat}): Moderately high
Landform(s): Old high stream terrace on upland
Landform position(s) (three-dimensional): Crest and side slope
Parent material: Fine-loamy alluvium or colluvium that is commonly underlain by limestone residuum
Elevation: 730 to 1,400 feet
Slope: 2 to 20 percent
Associated soils: Waynesboro and Dewey
Climatic data:
Mean annual precipitation: 51 to 67 inches
Mean annual air temperature: 44 to 69 degrees F
Frost-free period: 183 to 247 days
Taxonomic class: Fine-loamy, siliceous, semiactive, thermic Typic Paleudults

Typical Pedon

Location in survey area: Etowah loam, 2 to 5 percent slopes; in Roane County; 1.3 miles from Clax Gap Road on Webster Pike, 0.6 mile south on a field road; USGS Elverton, Tennessee topographic quadrangle; latitude 35 degrees 56 minutes 55.00 seconds north and longitude 84 degrees 29 minutes 57.00 seconds west; UTM Zone

16, 725563 meters easting, 3981140 meters northing; NAD83. (Colors are for moist soil unless otherwise noted.)

Ap—0 to 18 centimeters (0.0 to 7.0 inches); dark yellowish brown (10YR 3/4) loam; moderate medium granular structure; friable; many fine and many medium roots throughout; moderately acid, pH 5.5; clear smooth boundary.

BA—18 to 31 centimeters (7.0 to 12.0 inches); dark yellowish brown (10YR 4/4) loam; weak fine subangular blocky structure; friable; many fine and many medium roots throughout; moderately acid, pH 5.5; clear smooth boundary.

Bt1—31 to 69 centimeters (12.0 to 27.0 inches); strong brown (7.5YR 5/6) loam; moderate medium subangular blocky structure; friable; common fine and common medium roots throughout; common discontinuous distinct clay films on all faces of peds; strongly acid, pH 5.0; gradual smooth boundary.

Bt2—69 to 97 centimeters (27.0 to 38.0 inches); yellowish red (5YR 5/6) clay loam; moderate medium subangular blocky structure; friable; common fine roots throughout; common discontinuous distinct clay films on all faces of peds; strongly acid, pH 5.0; gradual smooth boundary.

Bt3—97 to 127 centimeters (38.0 to 50.0 inches); yellowish red (5YR 5/8) clay loam; moderate medium subangular blocky structure; friable; common continuous distinct clay films on all faces of peds; 12 percent fine iron-manganese concretions; strongly acid, pH 5.0; gradual smooth boundary.

Bt4—127 to 203 centimeters (50.0 to 80 inches); red (2.5YR 5/8) clay loam; moderate medium subangular blocky structure; friable; common continuous distinct clay films on all faces of peds; common fine iron-manganese concretions; strongly acid, pH 5.0.

Range in Characteristics

Depth to restrictive feature: Greater than 80 inches
Surface fragments: None
Seasonal high water table (depth): Greater than 6 feet

A horizon:
Hue—7.5YR or 10YR
Value—3 or 4
Chroma—3 or 4
Texture—silt loam, loam
Reaction—pH 4.5 to 5.5
Organic matter content—1.0 to 3.0 percent

BA or BE horizon (where present):
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—4 or 6
Texture—loam, silt loam, clay loam, silty clay loam
Reaction—pH 4.5 to 5.5
Organic matter content—0.0 to 0.5 percent

Bt horizon:
Hue—2.5YR to 7.5YR
Value—4 or 5
Chroma—6 or 8
Mottles—in some pedons in shades of brown or red
Texture—clay, silty clay loam, clay loam
Reaction—pH 4.5 to 5.5
Organic matter content—0.0 to 0.5 percent

Fullerton Series

MLRA: 128
Map unit(s):
FuB—Fullerton-Pailo complex, 2 to 5 percent slopes
FuC—Fullerton-Pailo complex, 5 to 12 percent slopes
FuD—Fullerton-Pailo complex, 12 to 20 percent slopes
FuE—Fullerton-Pailo complex, 20 to 35 percent slopes
FwD—Fullerton-Dewey-Urban land complex, 5 to 20 percent slopes
FwE—Fullerton-Dewey-Urban land complex, 20 to 35 percent slopes
Depth class: Very deep
Drainage class: Well drained
Saturated hydraulic conductivity (K_{sat}): Moderately high
Landform(s): Ridge on upland
Landform position(s) (three-dimensional): Crest and side slope
Parent material: Clayey residuum or creep deposits over clayey residuum weathered from cherty limestone
Elevation: 730 to 1,400 feet
Slope: 2 to 35 percent
Associated soils: Minvale, Dewey, and Pailo
Climatic data:
Mean annual precipitation: 51 to 67 inches
Mean annual air temperature: 44 to 69 degrees F
Frost-free period: 183 to 247 days
Taxonomic class: Fine, kaolinitic, thermic Typic Paleudults

Typical Pedon

Location in survey area: Fullerton gravelly silt loam in an area of Fullerton-Pailo complex, 12 to 20 percent slopes; in Roane County; on Johnston Valley Road $^{6}/_{10}$ mile north of Paint Rock Ferry Road, 2,000 feet southeast of the road; USGS Cave Creek, Tennessee topographic quadrangle; latitude 35 degrees 49 minutes 18.00 seconds north and longitude 84 degrees 28 minutes 52.00 seconds west; UTM Zone 16, 727555 meters easting, 3967098 meters northing; NAD83. (Colors are for moist soil unless otherwise noted.)

A—0 to 5 centimeters (0.0 to 2.0 inches); dark grayish brown (10YR 4/2) gravelly silt loam; moderate medium granular structure; friable; many fine and many medium roots throughout; 20 percent chert gravel; strongly acid, pH 5.0; abrupt smooth boundary.

BE—5 to 18 centimeters (2.0 to 7.0 inches); yellowish brown (10YR 5/4) gravelly silt loam; weak medium subangular blocky structure; friable; many fine and many medium roots throughout; 20 percent chert gravel; strongly acid, pH 5.0; clear smooth boundary.

Bt1—18 to 45 centimeters (7.0 to 18.0 inches); strong brown (7.5YR 5/6) gravelly clay; moderate medium subangular blocky structure; firm; common fine and common medium roots throughout; few discontinuous faint clay films on all faces of peds; 25 percent chert gravel; very strongly acid, pH 4.5; diffuse smooth boundary.

Bt2—45 to 84 centimeters (18.0 to 33.0 inches); yellowish red (5YR 5/6) gravelly clay; moderate medium subangular blocky structure; firm; common discontinuous distinct clay films on all faces of peds; 25 percent chert gravel; very strongly acid, pH 4.5; diffuse smooth boundary.

Bt3—84 to 178 centimeters (33.0 to 70.0 inches); red (2.5YR 5/8) gravelly clay; moderate medium angular blocky structure; firm; common discontinuous distinct clay films on all faces of peds; 25 percent chert gravel; very strongly acid, pH 4.5.

Range in Characteristics

Depth to restrictive feature: Greater than 80 inches
Surface fragments: None
Seasonal high water table (depth): Greater than 6 feet

A or Ap horizon:
Hue—7.5YR or 10YR
Value—3 or 4
Chroma—2 to 4
Texture—gravelly silt loam
Reaction—pH 4.5 to 5.5
Organic matter content—0.5 to 2.0 percent

AB horizon (where present):
Hue—5YR
Value—3 or 4
Chroma—4
Texture—gravelly silty clay loam
Reaction—pH 4.5 to 5.5
Organic matter content—0.5 to 2.0 percent

BE horizon (where present):
Hue—7.5YR or 10YR
Value—3 to 5
Chroma—3 to 6
Texture—gravelly silt loam or gravelly silty clay loam
Reaction—pH 4.5 to 5.5
Organic matter content—0.5 to 2.0 percent

Bt horizon:
Hue—2.5YR to 7.5YR
Value—3 to 5
Chroma—4 to 8
Texture—gravelly silty clay, gravelly clay, gravelly clay loam
Reaction—pH 4.5 to 5.5
Organic matter content—0.0 to 0.5 percent

Gilpin Series

MLRA: 125
Map unit(s):
GnD—Gilpin silt loam, 12 to 20 percent slopes
GpE—Gilpin-Petros complex, 20 to 35 percent slopes
GpF—Gilpin-Petros complex, 35 to 80 percent slopes
GsF—Gilpin-Bouldin-Petros complex, 25 to 80 percent slopes, very stony
LgD—Lily-Gilpin complex, 12 to 20 percent slopes
LgE—Lily-Gilpin complex, 20 to 35 percent slopes
Depth class: Moderately deep
Drainage class: Well drained
Saturated hydraulic conductivity (K_{sat}): Moderately high
Landform(s): Hillslope on mountains, mountain slope on mountains, hillslope on upland, and mountain slope on upland
Landform position(s) (two-dimensional): Backslope
Landform position(s) (three-dimensional): Side slope and mountain flank
Parent material: Fine-loamy residuum weathered from interbedded sedimentary rock

Elevation: 800 to 2,490 feet
Slope: 12 to 70 percent
Associated soils: Bouldin, Lily, Lonewood, Petros, and Ramsey
Climatic data:
Mean annual precipitation: 48 to 61 inches
Mean annual air temperature: 41 to 67 degrees F
Frost-free period: 163 to 214 days
Taxonomic class: Fine-loamy, mixed, active, mesic Typic Hapludults

Typical Pedon

Location in survey area: Gilpin silt loam in an area of Gilpin-Petros complex, 35 to 70 percent slopes, very stony; in Scott County; on a ridgetop 100 feet northeast of Ridge Road, 0.3 mile east of the intersection of Brimstone Road and Ridge Road, about 1 mile southeast of the community of Robbins; USGS Robbins, Tennessee topographic quadrangle; latitude 36 degrees 20 minutes 37.00 seconds north and longitude 84 degrees 34 minutes 38.00 seconds west; UTM Zone 16, 717433 meters easting, 4024585 meters northing; NAD83. (Colors are for moist soil unless otherwise noted.)

A—0 to 8 centimeters (0.0 to 3.0 inches); dark grayish brown (10YR 4/2) silt loam; moderate medium granular structure; very friable; many fine and many medium roots throughout; 5 percent shale channers; strongly acid, pH 5.0; abrupt smooth boundary.

BE—8 to 15 centimeters (3.0 to 6.0 inches); yellowish brown (10YR 5/4) silt loam; weak fine subangular blocky structure; very friable; common fine and common medium roots throughout; 5 percent shale channers; strongly acid, pH 5.0; gradual smooth boundary.

Bt1—15 to 31 centimeters (6.0 to 12.0 inches); yellowish brown (10YR 5/6) silty clay loam; moderate medium subangular blocky structure; friable; common fine and common medium roots throughout; few faint clay films on all faces of peds; 5 percent shale channers; strongly acid, pH 5.0; gradual smooth boundary.

Bt2—31 to 53 centimeters (12.0 to 21.0 inches); yellowish brown (10YR 5/6) silty clay loam; moderate medium subangular blocky structure; friable; common fine and common medium roots throughout; common faint clay films on all faces of peds; 10 percent shale channers; very strongly acid, pH 4.5; gradual smooth boundary.

BC—53 to 64 centimeters (21.0 to 25.0 inches); brownish yellow (10YR 6/6) channery silty clay loam; common fine prominent yellowish red (5YR 5/6), common fine faint pale brown (10YR 6/3), common medium prominent yellowish red (5YR 5/6), and common medium faint pale brown (10YR 6/3) mottles; weak medium subangular blocky structure; friable; common fine and common medium roots throughout; 20 percent shale channers; extremely acid, pH 4.0; abrupt wavy boundary.

Cr—64 to 89 centimeters (25.0 to 35 inches); rippable shale and siltstone bedrock.

Range in Characteristics

Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Surface fragments: None
Seasonal high water table (depth): Greater than 6 feet

A horizon:
Hue—10YR
Value—3 or 4
Chroma—2 or 3
Texture—silt loam, loam
Reaction—pH 3.6 to 5.5
Organic matter content—0.5 to 4.0 percent

Bt horizon:
Hue—10YR or 7.5YR
Value—4 to 6
Chroma—4 to 6
Texture—clay loam, silty clay loam
Reaction—pH 3.6 to 6.0
Organic matter content—0.0 to 1.0 percent

BC horizon (where present):
Color—similar to the Bt horizon
Texture—similar to the Bt horizon
Reaction—pH 3.6 to 6.0
Organic matter content—0.0 to 1.0 percent

C horizon (where present):
Hue—10YR or 2.5Y
Value—5 or 6
Chroma—3 to 6
Mottles—in some pedons in shades of red or brown
Texture—channery silty clay loam, channery silt loam, silt loam
Reaction—pH 3.6 to 5.5
Organic matter content—0.0 to 0.5 percent

Cr horizon(s):
Texture—weathered, rippable shale and siltstone bedrock

Hamblen Series

MLRA: 128
Map unit(s):
Ha—Hamblen silt loam, occasionally flooded
Depth class: Very deep
Drainage class: Moderately well drained
Saturated hydraulic conductivity (K_{sat}): Moderately high
Landform(s): Flood plain in valley
Parent material: Fine-loamy alluvium derived from limestone, sandstone, and shale
Elevation: 710 to 910 feet
Slope: 0 to 3 percent
Associated soils: Whitwell, Shady, and Swafford
Climatic data:
Mean annual precipitation: 51 to 67 inches
Mean annual air temperature: 44 to 69 degrees F
Frost-free period: 183 to 247 days
Taxonomic class: Fine-loamy, siliceous, semiactive, thermic Fluvaquentic Eutrudepts

Typical Pedon

Location in survey area: Hamblen silt loam, occasionally flooded; in Roane County; 250 feet north of Black Jack Road and 800 feet southeast of Post Oak Church; USGS Rockwood, Tennessee topographic quadrangle; latitude 35 degrees 51 minutes 45.00 seconds north and longitude 84 degrees 38 minutes 5.00 seconds west; UTM Zone 16, 713565 meters easting, 397128 meters northing; NAD83. (Colors are for moist soil unless otherwise noted.)

Ap—0 to 13 centimeters (0.0 to 5.0 inches); dark yellowish brown (10YR 4/4) silt loam; weak medium granular structure; very friable; many fine roots throughout; neutral, pH 7.0; clear smooth boundary.

Bw1—13 to 56 centimeters (5.0 to 22.0 inches); yellowish brown (10YR 5/6) silt loam; weak fine subangular blocky structure; very friable; common fine roots throughout; slightly acid, pH 6.0; gradual smooth boundary.
Bw2—56 to 109 centimeters (22.0 to 43.0 inches); yellowish brown (10YR 5/6) silt loam; weak coarse subangular blocky structure; very friable; common fine roots throughout; few fine prominent yellowish red (5YR 5/6) masses of oxidized iron throughout and common medium distinct light brownish gray (10YR 6/2) iron depletions throughout; slightly acid, pH 6.0; clear smooth boundary.
C—109 to 156 centimeters (43.0 to 62.0 inches); light yellowish brown (10YR 6/4) silt loam; massive; very friable; many coarse distinct light brownish gray (10YR 6/2) iron depletions throughout and many medium prominent yellowish red (5YR 5/6) masses of oxidized iron throughout; moderately acid, pH 5.5.

Range in Characteristics

Depth to restrictive feature: Greater than 80 inches
Surface fragments: None
Seasonal high water table: January, February, March, December
Depth to top of water table: 24 to 36 inches

A or Ap horizon:
Hue—10YR
Value—4 or 5
Chroma—2 to 4
Texture—silt loam
Reaction—pH 5.0 to 7.0
Organic matter content—1.0 to 3.0 percent

Bw horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 6
Mottles—commonly present in shades of brown or yellow
Texture—silt loam, clay loam, loam
Reaction—pH 5.0 to 7.0
Organic matter content—0.2 to 1.0 percent

C or Cg horizon (where present):
Hue—7.5YR to 2.5Y
Value—4 to 8
Chroma—0 to 8
Texture—clay loam, sandy clay loam, loam
Reaction—pH 4.5 to 6.0
Organic matter content—0.1 to 1.0 percent
Other characteristics—horizon may be mottled in shades of brown, gray, and red without a dominant color

Hendon Series

MLRA: 125
Map unit(s):
HeB—Hendon silt loam, 2 to 5 percent slopes
HeC—Hendon silt loam, 5 to 12 percent slopes
Depth class: Deep
Drainage class: Well drained
Saturated hydraulic conductivity (K_{sat}): Moderately high

Landform(s): Interfluve on plateau
Landform position(s) (three-dimensional): Interfluve and side slope
Parent material: Silty-mantle over fine-loamy residuum weathered from sandstone and shale
Elevation: 800 to 2,490 feet
Slope: 2 to 12 percent
Associated soils: Lonewood, Gilpin, and Lily
Climatic data:
Mean annual precipitation: 48 to 61 inches
Mean annual air temperature: 41 to 67 degrees F
Frost-free period: 163 to 214 days
Taxonomic class: Fine-loamy, siliceous, semiactive, mesic Fragic Paleudults

Typical Pedon

Location in survey area: Hendon silt loam, 2 to 5 percent slopes; in Morgan County; on a ridgetop 150 feet west of Tennessee Highway 299, about 800 feet northwest of the intersection of Deer Haven Road and Tennessee Highway 299, about 2 miles southwest of Pine Orchard; USGS Cardiff, Tennessee topographic quadrangle; latitude 35 degrees 56 minutes 51.00 seconds north and longitude 84 degrees 40 minutes 31.00 seconds west; UTM Zone 16, 709679 meters easting, 3980623 meters northing; NAD83. (Colors are for moist soil unless otherwise noted.)

A—0 to 5 centimeters (0.0 to 2.0 inches); brown (10YR 4/3) silt loam; weak fine granular structure; very friable; common fine, common medium, and common coarse roots throughout; very strongly acid, pH 4.5; clear smooth boundary.

BE—5 to 23 centimeters (2.0 to 9.0 inches); yellowish brown (10YR 5/4) silt loam; weak medium granular and weak medium subangular blocky structure; very friable; common fine, common medium, and common coarse roots throughout; very strongly acid, pH 4.5; gradual smooth boundary.

Bt1—23 to 38 centimeters (9.0 to 15.0 inches); yellowish brown (10YR 5/6) silty clay loam; moderate medium subangular blocky structure; friable; common fine, common medium, and common coarse roots throughout; 15 percent faint clay films on all faces of peds; very strongly acid, pH 4.5; gradual smooth boundary.

Bt2—38 to 56 centimeters (15.0 to 22.0 inches); strong brown (7.5YR 5/6) silty clay loam; moderate medium subangular blocky structure; friable; common fine and common medium roots throughout; 15 percent faint clay films on all faces of peds; very strongly acid, pH 4.5; clear wavy boundary.

2Btx—56 to 76 centimeters (22.0 to 30.0 inches); strong brown (7.5YR 5/6) clay loam; 11 percent medium prominent red (2.5YR 4/8) and 11 percent medium prominent light yellowish brown (10YR 6/4) mottles; moderate medium subangular blocky structure; firm; 40 to 60 percent brittleness; 38 percent discontinuous clay films on all faces of peds; 10 percent sandstone pebbles; very strongly acid, pH 4.5; clear wavy boundary.

2Bt1—76 to 122 centimeters (30.0 to 48.0 inches); yellowish red (5YR 5/8) clay loam; 11 percent medium prominent yellowish brown (10YR 5/6) mottles; strong medium subangular blocky structure; friable; 38 percent continuous clay films on all faces of peds; very strongly acid, pH 4.5; gradual smooth boundary.

2Bt2—122 to 203 centimeters (48.0 to 80.0 inches); red (2.5YR 4/6) clay loam; strong medium subangular blocky structure; friable; 38 percent continuous clay films on all faces of peds; very strongly acid, pH 4.5.

Range in Characteristics

Depth to restrictive feature: 20 to 36 inches to fragipan
Surface fragments: None
Seasonal high water table (depth): Greater than 6 feet

A or Ap horizon:
Hue—10YR
Value—3 to 5
Chroma—3 or 4
Texture—silt loam, loam
Reaction—pH 4.5 to 5.5
Organic matter content—1.0 to 3.0 percent

BE horizon (where present):
Hue—10YR
Value—3 to 5
Chroma—3 or 4
Texture—silt loam
Reaction—pH 4.5 to 5.5
Organic matter content—0.1 to 0.5 percent

Bt horizon:
Hue—10YR or 7.5YR
Value—5 or 6
Chroma—4 to 8
Texture—silty clay loam
Reaction—pH 4.5 to 5.5
Organic matter content—0.0 to 0.5 percent

2Btx and 2Bt horizons:
Hue—7.5YR to 2.5YR
Value—4 or 5
Chroma—6 or 8
Mottles—in some pedons in shades of brown, yellow, or red; gray mottles are in a few pedons below a depth of 30 inches
Texture—loam, clay loam
Reaction—pH 4.5 to 5.5
Organic matter content—0.0 to 0.5 percent

Jefferson Series

MLRA: 128
Map unit(s):
AfD—Allen-Jefferson-Urban land complex, 5 to 20 percent slopes
JeC—Jefferson loam, 5 to 12 percent slopes
JeE—Jefferson loam, 12 to 35 percent slopes
JnD—Jefferson cobbly loam, 12 to 20 percent slopes
JnF—Jefferson cobbly loam, 20 to 50 percent slopes
Depth class: Very deep
Drainage class: Well drained
Saturated hydraulic conductivity (K_{sat}): Moderately high
Landform(s): Mountain slope on mountains
Landform position(s) (three-dimensional): Mountain base and mountain flank (lower third)
Parent material: Fine-loamy colluvium derived from interbedded sedimentary rock
Elevation: 730 to 2,490 feet
Slope: 5 to 50 percent
Associated soils: Allen, Gilpin, Bouldin, Petros, Dewey, Etowah, and Minvale
Climatic data:
Mean annual precipitation: 48 to 67 inches

Mean annual air temperature: 41 to 69 degrees F
Frost-free period: 163 to 247 days
Taxonomic class: Fine-loamy, siliceous, semiactive, mesic Typic Hapludults

Typical Pedon

Location in survey area: Jefferson loam, 5 to 12 percent slopes; in Roane County; 2 miles west on Black Creek Road, 15 feet east of the road; USGS Roddy, Tennessee topographic quadrangle; latitude 35 degrees 48 minutes 21.00 seconds north and longitude 84 degrees 45 minutes 21.00 seconds west; UTM Zone 16, 702370 meters easting, 3964758 meters northing; NAD83. (Colors are for moist soil unless otherwise noted.)

Ap—0 to 15 centimeters (0.0 to 5.9 inches); brown (10YR 4/3) loam; moderate medium granular structure; very friable; many fine and many medium roots throughout; 5 percent sandstone gravel; strongly acid, pH 5.0; gradual smooth boundary.

BA—15 to 28 centimeters (5.9 to 11.0 inches); yellowish brown (10YR 5/4) loam; weak fine subangular blocky structure; friable; many fine and many medium roots throughout; 5 percent sandstone gravel; strongly acid, pH 5.0; gradual smooth boundary.

Bt1—28 to 58 centimeters (11.0 to 23.0 inches); yellowish brown (10YR 5/6) clay loam; moderate medium subangular blocky structure; friable; common fine and common medium roots throughout; few discontinuous faint clay films on all faces of peds; 10 percent sandstone gravel; very strongly acid, pH 4.5; gradual smooth boundary.

Bt2—58 to 89 centimeters (23.0 to 35.0 inches); strong brown (7.5YR 5/6) clay loam; moderate medium subangular blocky structure; friable; common fine and common very fine roots throughout; common discontinuous distinct clay films on all faces of peds; 10 percent sandstone gravel; very strongly acid, pH 4.5; gradual smooth boundary.

BC—89 to 122 centimeters (35.0 to 48.0 inches); strong brown (7.5YR 5/6) gravelly loam; common medium distinct brownish yellow (10YR 6/8) and common medium distinct yellowish brown (10YR 5/4) mottles; weak medium subangular blocky structure; friable; 25 percent sandstone gravel; very strongly acid, pH 4.5; gradual smooth boundary.

C—122 to 147 centimeters (48.0 to 58.0 inches); yellowish brown (10YR 5/4) gravelly fine sandy loam; common medium distinct strong brown (7.5YR 5/6) mottles; massive; very friable; 20 percent sandstone gravel; very strongly acid, pH 4.5.

Range in Characteristics

Surface fragments: None
Seasonal high water table (depth): Greater than 6 feet

A or Ap horizon:
Hue—10YR
Value—3 to 5
Chroma—2 to 4
Texture—loam, cobbly loam
Reaction—pH 3.6 to 5.5
Organic matter content—0.5 to 5.0 percent

BE or BA horizon (where present):
Hue—7.5YR to 10YR
Value—4 to 6

Chroma—4 or 6
Texture—cobbly clay loam, cobbly loam, gravelly sandy clay loam, clay loam, loam
Reaction—pH 4.5 to 5.5
Organic matter content—0.0 to 0.5 percent

Bt horizon:
Hue—5YR to 10YR
Value—4 or 5
Chroma—6 to 8
Texture—very cobbly clay loam, gravelly loam, gravelly clay loam, gravelly sandy clay loam
Reaction—pH 4.5 to 5.5
Organic matter content—0.0 to 0.5 percent

BC horizon (where present):
Hue—5YR to 10YR
Value—5 or 6
Chroma—4 to 8
Texture—very gravelly sandy loam, cobbly loam, gravelly fine sandy loam, cobbly clay loam

C horizon (where present):
Hue—10YR
Value—5 or 6
Chroma—4 or 6
Texture—very gravelly sandy loam, cobbly loam, gravelly fine sandy loam, cobbly clay loam
Reaction—pH 4.5 to 6.5
Organic matter content—0.0 to 0.5 percent

Lily Series

MLRA: 125
Map unit(s):
LbB—Lily loam, 2 to 5 percent slopes
LbC—Lily loam, 5 to 12 percent slopes
LbD—Lily loam, 12 to 20 percent slopes
LgD—Lily-Gilpin complex, 12 to 20 percent slopes
LgE—Lily-Gilpin complex, 20 to 35 percent slopes
LmD—Lily-Ramsey complex, 12 to 20 percent slopes
LmE—Lily-Ramsey complex, 20 to 35 percent slopes
Depth class: Moderately deep
Drainage class: Well drained
Saturated hydraulic conductivity (K_{sat}): High
Landform(s): Hillslope on upland
Landform position(s) (three-dimensional): Crest and side slope
Parent material: Fine-loamy residuum weathered from sandstone
Elevation: 800 to 2,490 feet
Slope: 2 to 35 percent
Associated soils: Gilpin, Ramsey, Hendon, and Lonewood
Climatic data:
Mean annual precipitation: 48 to 61 inches
Mean annual air temperature: 41 to 67 degrees F
Frost-free period: 163 to 214 days
Taxonomic class: Fine-loamy, siliceous, semiactive, mesic Typic Hapludults

Typical Pedon

Location in survey area: Lily loam in an area of Lily-Ramsey complex, 5 to 12 percent slopes; on a ridgetop in the Scott State Forest, 1,000 feet northwest of the intersection of Bandy Creek Road and Tennessee Highway 297 (Leatherwood Road), about 1 mile by road northwest of the Leatherwood Ford on the South Fork of the Cumberland River; USGS Honey Creek, Tennessee topographic quadrangle; latitude 36 degrees 28 minutes 53.00 seconds north and longitude 84 degrees 40 minutes 57.00 seconds west; UTM Zone 16, 707611 meters easting, 4039841 meters northing; NAD83.
(Colors are for moist soil unless otherwise noted.)

A—0 to 8 centimeters (0.0 to 3.0 inches); brown (10YR 4/3) loam; weak fine granular structure; friable; common fine and common medium roots throughout; very strongly acid, pH 4.5; abrupt smooth boundary.

BE—8 to 23 centimeters (3.0 to 9.0 inches); yellowish brown (10YR 5/4) loam; moderate medium granular structure; friable; common fine, common medium, and common coarse roots throughout; very strongly acid, pH 4.5; clear smooth boundary.

Bt1—23 to 46 centimeters (9.0 to 18.0 inches); yellowish brown (10YR 5/6) clay loam; weak medium subangular blocky structure; friable; common fine, common medium, and common coarse roots throughout; few discontinuous faint clay films on all faces of peds; very strongly acid, pH 4.5; gradual wavy boundary.

Bt2—46 to 76 centimeters (18.0 to 30.0 inches); yellowish brown (10YR 5/8) clay loam; moderate medium subangular blocky structure; friable; common fine roots; few discontinuous faint clay films on all faces of peds; very strongly acid, pH 4.5; gradual wavy boundary.

R—76 to 86 centimeters (30.0 to 34.0 inches); sandstone bedrock.

Range in Characteristics

Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Surface fragments: None
Seasonal high water table (depth): Greater than 6 feet

A or Ap horizon:
Hue—10YR
Value—4 to 6
Chroma—2 to 4
Texture—loam
Reaction—pH 3.6 to 5.5
Organic matter content—0.5 to 4.0 percent

BE horizon:
Hue—10YR
Value—4 to 6
Chroma—2 to 4
Texture—loam
Reaction—pH 3.6 to 5.5
Organic matter content—0.5 to 4.0 percent

Bt horizon:
Hue—10YR or 7.5YR
Value—4 to 6
Chroma—4 to 8
Texture—clay loam, loam
Reaction—pH 3.6 to 5.5
Organic matter content—0.0 to 0.5 percent

R horizon:
Texture—unweathered sandstone bedrock

Lonewood Series

MLRA: 125
Map unit(s):
LoB—Lonewood silt loam, 2 to 5 percent slopes
LoC—Lonewood silt loam, 5 to 12 percent slopes
Depth class: Deep and very deep
Drainage class: Well drained
Saturated hydraulic conductivity (K_{sat}): Moderately high
Landform(s): Hillslope on plateau and interfluve on plateau
Landform position(s) (three-dimensional): Interfluve and side slope
Parent material: Silty mantle over fine-loamy residuum weathered from interbedded sedimentary rock
Elevation: 800 to 2,490 feet
Slope: 2 to 12 percent
Associated soils: Gilpin, Lily, Hendon, and Ramsey
Climatic data:
Mean annual precipitation: 48 to 61 inches
Mean annual air temperature: 41 to 67 degrees F
Frost-free period: 163 to 214 days
Taxonomic class: Fine-loamy, siliceous, semiactive, mesic Typic Hapludults

Typical Pedon

Location in survey area: Lonewood silt loam in an area of Lonewood silt loam, 2 to 5 percent slopes; in Scott County; on a ridgetop in Scott State Forest, 550 feet southwest of Bandy Creek Campground, past the swimming pool by a trail, 1.25 miles northwest of the intersection of Bandy Creek Road and Tennessee Highway 297 (Leatherwood Road), about 2.3 miles by road northwest of the Leatherwood Ford on the South Fork of the Cumberland River; USGS Honey Creek, Tennessee topographic quadrangle; latitude 36 degrees 29 minutes 12.00 seconds north and longitude 84 degrees 41 minutes 31.00 seconds west; NAD83. (Colors are for moist soil unless otherwise noted.)

A—0 to 5 centimeters (0.0 to 2.0 inches); brown (10YR 4/3) silt loam; weak medium granular structure; very friable; common fine and common medium roots throughout; strongly acid, pH 5.0; clear smooth boundary.
BE—5 to 20 centimeters (2.0 to 8.0 inches); yellowish brown (10YR 5/6) silt loam; weak fine subangular blocky structure; very friable; common fine and common medium roots throughout; strongly acid, pH 5.0; clear smooth boundary.
Bt1—20 to 50 centimeters (8.0 to 20.0 inches); yellowish brown (10YR 5/6) silt loam; moderate medium subangular blocky structure; friable; 1 percent discontinuous faint clay films; strongly acid, pH 5.0; gradual smooth boundary.
Bt2—50 to 71 centimeters (20.0 to 28.0 inches); yellowish brown (10YR 5/6) silty clay loam; moderate medium subangular blocky structure; friable; common fine and common medium roots throughout; few discontinuous faint clay films; strongly acid, pH 5.0; gradual smooth boundary.
2Bt3—71 to 94 centimeters (28.0 to 37.0 inches); strong brown (7.5YR 4/6) clay loam; moderate medium subangular blocky structure; friable; common medium distinct irregular light yellowish brown (10YR 6/4) mottles; friable; common discontinuous distinct clay films; strongly acid, pH 5.0; gradual smooth boundary.

2Bt4—94 to 127 centimeters (37.0 to 50.0 inches); strong brown (7.5YR 5/6) clay loam; few medium distinct irregular yellowish brown (10YR 5/6) mottles; moderate medium subangular blocky structure; friable; common discontinuous distinct clay films on surfaces along root channels; 5 percent sandstone channers; very strongly acid, pH 4.5; gradual smooth boundary.

2BC—127 to 140 centimeters (50.0 to 55.0 inches); yellowish red (5YR 5/8) clay loam; common medium prominent yellowish brown (10YR 5/6) and common medium strong brown (7.5YR 5/6) lithochromic mottles; weak coarse subangular blocky structure; friable; 10 percent sandstone channers; very strongly acid, pH 4.5; abrupt smooth boundary.

2Cr—140 to 152 centimeters (55.0 to 60.0 inches); weathered sandstone bedrock.

2R—152 to 165 centimeters (60.0 to 65.0 inches); sandstone bedrock.

Range in Characteristics

Depth to restrictive feature: 40 to 72 inches to paralithic bedrock
Surface fragments: None
Seasonal high water table (depth): Greater than 6 feet
Other characteristics: Some pedons have transitional horizons between the A and Bt horizons; these horizons have colors and textures similar to the B horizon

A horizon:
Hue—10YR
Value—3 to 5
Chroma—2 to 4
Texture—silt loam
Reaction—pH 4.5 to 5.5
Organic matter content—1.0 to 3.0 percent

BE horizon (where present):
Hue—10YR
Value—4 to 6
Chroma—2 to 4
Texture—silt loam, loam
Reaction—pH 4.5 to 5.5
Organic matter content—1.0 to 3.0 percent

Bt horizon (upper part):
Hue—10YR to 5YR
Value—5
Chroma—4 to 8
Texture—silty clay loam
Reaction—pH 4.5 to 5.5
Organic matter content—0.0 to 0.5 percent

Bt horizon (lower part):
Hue—7.5YR to 2.5YR
Value—4 or 5
Chroma—6 or 8
Mottles—in some pedons in shades of brown, yellow, or red
Texture—loam, clay loam
Reaction—pH 4.5 to 5.5
Organic matter content—0.0 to 0.5 percent

BC horizon:
Color—similar to the lower part of the Bt horizon
Texture—similar to the lower part of the Bt horizon

Cr horizon(s):
Texture—weathered sandstone bedrock

R horizon(s):
Texture—unweathered sandstone bedrock

Lyerly Series

MLRA: 128
Map unit(s):
CbD—Colbert-Lyerly-Rock outcrop complex, 5 to 20 percent slopes
Depth class: Moderately deep
Drainage class: Moderately well drained and well drained
Saturated hydraulic conductivity (K_{sat}): Moderately low
Landform(s): Hillslope on upland
Landform position(s) (three-dimensional): Side slope
Parent material: Clayey residuum weathered from argillaceous or shaly limestone
Elevation: 730 to 1,400 feet
Slope: 5 to 20 percent
Associated soils: Colbert, Bloomingdale, Capshaw, and Collegedale
Climatic data:
Mean annual precipitation: 51 to 67 inches
Mean annual air temperature: 44 to 69 degrees F
Frost-free period: 183 to 247 days
Taxonomic class: Very fine, mixed, active, thermic Oxyaquic Vertic Hapludalfs

Typical Pedon

Location in survey area: Lyerly silt loam in an area of Colbert-Lyerly-Rock outcrop complex, 5 to 20 percent slopes; in Roane County; from Kingston south on Highway 58, approximately 9 miles south and 0.5 mile southeast of the highway; USGS Pattie Gap, Tennessee topographic quadrangle; latitude 35 degrees 44 minutes 48.00 seconds north and longitude 84 degrees 36 minutes 47.00 seconds west; UTM Zone 16, 715836 meters easting, 3958479 meters northing; NAD83. (Colors are for moist soil unless otherwise noted.)

A—0 to 13 centimeters (0.0 to 5.0 inches); brown (10YR 4/3) silt loam; moderate medium granular structure; very friable; many fine and many medium roots throughout; slightly acid, pH 6.0; clear smooth boundary.
BE—13 to 25 centimeters (5.0 to 10.0 inches); yellowish brown (10YR 5/6) silty clay loam; weak medium subangular blocky structure; friable; many fine and common medium roots throughout; slightly acid, pH 6.0; gradual smooth boundary.
Bt—25 to 61 centimeters (10.0 to 24.0 inches); yellowish brown (10YR 5/6) clay; weak medium angular blocky structure; firm; common discontinuous distinct clay films on vertical faces of peds; slightly acid, pH 6.0; diffuse smooth boundary.
Btss—61 to 97 centimeters (24.0 to 38.0 inches); mottled light brownish gray (10YR 6/2), olive yellow (2.5Y 6/6), and yellowish brown (10YR 5/6) clay; moderate coarse angular blocky structure; firm; few discontinuous distinct slickensides (pedogenic) on vertical faces of peds and common discontinuous distinct clay films on all faces of peds; few medium strongly cemented manganese masses throughout; slightly acid, pH 6.0; abrupt smooth boundary.
R—97 to 107 centimeters (38.0 to 42.0 inches); limestone bedrock.

Range in Characteristics

Depth to restrictive feature: 20 to 40 inches to lithic bedrock

Surface fragments: None
Seasonal high water table (depth): Greater than 6 feet

A or Ap horizon:
Hue—10YR
Value—3 to 4
Chroma—2 to 4
Texture—silt loam
Reaction—pH 5.0 to 6.5
Organic matter content—0.5 to 2.0 percent

BA or BE horizon (where present):
Hue—10YR
Value—4 or 5
Chroma—4 or 6
Texture—silty clay loam
Reaction—pH 5.0 to 6.5
Organic matter content—0.5 to 1.0 percent

Bt horizon:
Hue—7.5YR to 2.5Y
Value—5 to 7
Chroma—4 to 8
Texture—silty clay loam, silty clay, clay
Reaction—pH 5.0 to 6.5
Organic matter content—0.0 to 0.5 percent

Btss horizon:
Hue—7.5YR to 2.5Y
Value—4 to 6
Chroma—4 to 8
Reaction—pH 5.0 to 6.5
Organic matter content—0.0 to 0.5 percent

R horizon:
Texture—unweathered limestone bedrock

Melvin Taxadjunct

MLRA: 128
Map unit(s):
Me—Melvin silt loam, frequently flooded
Depth class: Very deep
Drainage class: Poorly drained
Saturated hydraulic conductivity (K_{sat}): Moderately high
Landform(s): Flood plain in valley
Parent material: Fine-silty alluvium derived from interbedded sedimentary rock
Elevation: 710 to 910 feet
Slope: 0 to 2 percent
Associated soils: Swafford, Whitwell, Shady, and Hamblen
Climatic data:
Mean annual precipitation: 51 to 67 inches
Mean annual air temperature: 44 to 69 degrees F
Frost-free period: 183 to 247 days
Taxonomic class: Fine-silty, mixed, active, nonacid, mesic Fluvaquentic Endoaquepts

Typical Pedon

Location in survey area: Melvin silt loam, frequently flooded; in Roane County; from Kingston travel west on Tennessee State Highway 70 approximately 1.5 miles, turn right on Swan Pond Road, travel 2.5 miles, site is 0.1 mile southeast of the road; USGS Harriman, Tennessee topographic quadrangle; latitude 35 degrees 55 minutes 49.00 seconds north and longitude 84 degrees 30 minutes 34.00 seconds west; UTM Zone 16, 724687 meters easting, 3979082 meters northing; NAD83. (Colors are for moist soil unless otherwise noted.)

Ap—0 to 8 centimeters (0.0 to 3.0 inches); dark grayish brown (10YR 4/2) silt loam; moderate medium granular structure; very friable; many fine roots throughout; common fine prominent strong brown (7.5YR 5/6) masses of oxidized iron; very strongly acid, pH 4.5; clear smooth boundary.

BE—8 to 20 centimeters (3.0 to 8.0 inches); brown (10YR 5/3) silt loam; weak fine subangular blocky structure; very friable; common fine roots throughout; few fine irregular strongly cemented iron-manganese concretions and many fine prominent yellowish red (5YR 5/8) masses of oxidized iron; very strongly acid, pH 4.5; gradual wavy boundary.

Bg1—20 to 66 centimeters (8.0 to 26.0 inches); light brownish gray (10YR 6/2) silt loam; weak medium subangular blocky structure; friable; common fine roots throughout; many fine prominent yellowish red (5YR 5/6) masses of oxidized iron; very strongly acid, pH 4.5; diffuse wavy boundary.

Bg2—66 to 132 centimeters (26.0 to 52.0 inches); light brownish gray (10YR 6/2) silt loam; weak medium subangular blocky structure; friable; common coarse distinct brownish yellow (10YR 6/8) and many coarse distinct yellowish brown (10YR 5/6) masses of oxidized iron; very strongly acid, pH 4.5; diffuse wavy boundary.

Cg—132 to 203 centimeters (52.0 to 80 inches); light brownish gray (2.5Y 6/2) silt loam; massive; friable; common coarse prominent brownish yellow (10YR 6/8) masses of oxidized iron; very strongly acid, pH 4.5.

Range in Characteristics

Depth to restrictive feature: Greater than 80 inches
Surface fragments: None
Seasonal high water table: January, February, March, April, May, December
Depth to top of water table: 0 to 12 inches

A or Ap horizon:
Hue—10YR
Value—3 to 5
Chroma—1 to 3
Texture—silt loam
Reaction—pH 5.6 to 7.8
Organic matter content—0.5 to 3.0 percent

BE horizon (where present):
Hue—10YR
Value—5
Chroma—3
Texture—silt loam
Reaction—pH 5.6 to 7.8
Organic matter content—0.5 to 3.0 percent

Bg horizon:
Hue—10YR or 2.5Y
Value—4 to 7
Chroma—1 or 2

Texture—silt loam, silty clay loam
Reaction—pH 5.6 to 7.8
Organic matter content—0.2 to 0.5 percent

Cg horizon (where present):
Hue—10YR or 2.5Y
Value—5 to 7
Chroma—1 or 2
Texture—silt loam, silty clay loam, loam
Reaction—pH 5.6 to 7.8
Organic matter content—0.1 to 0.5 percent

The Melvin soils in Roane County are considered taxadjuncts to the series based on temperature regimes. The difference, however, does not significantly affect the use and management of the soils.

Minvale Series

MLRA: 128
Map unit(s):
MnC—Minvale gravelly silt loam, 5 to 12 percent slopes
Depth class: Very deep
Drainage class: Well drained
Saturated hydraulic conductivity (K_{sat}): Moderately high
Landform(s): Ridge on upland
Landform position(s) (three-dimensional): Head slope and footslope
Parent material: Fine-loamy colluvium derived from cherty limestone
Elevation: 730 to 1,400 feet
Slope: 5 to 12 percent
Associated soils: Dewey, Fullerton, and Pailo
Climatic data:
Mean annual precipitation: 51 to 67 inches
Mean annual air temperature: 44 to 69 degrees F
Frost-free period: 183 to 247 days
Taxonomic class: Fine-loamy, siliceous, subactive, thermic Typic Paleudults

Typical Pedon

Location in survey area: Minvale gravelly silt loam, 5 to 12 percent slopes; in Roane County; from the intersection of Highway 27 and Highway 70 travel south on Highway 27 about 1 mile, turn right onto Mount View Road, in a field to the left of the road immediately after crossing the railroad tracks; USGS Rockwood, Tennessee topographic quadrangle; latitude 35 degrees 50 minutes 8.00 seconds north and longitude 84 degrees 42 minutes 47.00 seconds west; UTM Zone 16, 706561 meters easting, 3968124 meters northing; NAD83. (Colors are for moist soil unless otherwise noted.)

Ap—0 to 13 centimeters (0.0 to 5.0 inches); brown (10YR 4/3) silt loam; moderate medium granular structure; very friable; many fine and many medium roots throughout; 20 percent chert gravel; moderately acid, pH 5.5; clear smooth boundary.

Bt1—13 to 64 centimeters (5.0 to 25.0 inches); strong brown (7.5YR 5/6) gravelly silty clay loam; moderate medium subangular blocky structure; friable; common fine and common medium roots throughout; few discontinuous faint clay films on all faces of peds; 17 percent chert gravel; strongly acid, pH 5.0; diffuse smooth boundary.

Bt2—64 to 97 centimeters (25.0 to 38.0 inches); yellowish red (5YR 5/6) gravelly silty clay loam; moderate medium subangular blocky structure; friable; common fine and common medium roots throughout; common discontinuous distinct clay films on all faces of peds; 20 percent chert gravel; strongly acid, pH 5.0; diffuse smooth boundary.

Bt3—97 to 122 centimeters (38.0 to 48.0 inches); yellowish red (5YR 5/8) gravelly silty clay loam; moderate medium subangular blocky structure; friable; common discontinuous distinct clay films on all faces of peds; 20 percent chert gravel; very strongly acid, pH 4.5; diffuse smooth boundary.

Bt4—122 to 156 centimeters (48.0 to 62.0 inches); yellowish red (5YR 5/8) gravelly clay; strong medium angular blocky and moderate medium subangular blocky structure; firm; common discontinuous distinct clay films on all faces of peds; 20 percent chert gravel; very strongly acid, pH 4.5.

Range in Characteristics

Depth to restrictive feature: Greater than 80 inches
Surface fragments: None
Seasonal high water table (depth): Greater than 6 feet

A or Ap horizon:
Hue—10YR or 7.5YR
Value—3 or 4
Chroma—2 to 4
Texture—gravelly silt loam
Reaction—pH 4.5 to 5.5
Organic matter content—0.5 to 2.0 percent

BE horizon (where present):
Hue—10YR
Value—4 to 6
Chroma—4 or 6
Texture—silt loam
Reaction—pH 4.5 to 5.5
Organic matter content—0.5 to 2.0 percent

Bt horizon:
Hue—5YR to 10YR
Value—4 to 6
Chroma—6 or 8
Texture—gravelly silty clay loam, gravelly loam, gravelly silty clay, gravelly clay loam, gravelly clay, very gravelly silty clay loam, very gravelly clay loam, very gravelly clay
Reaction—pH 4.5 to 5.5
Organic matter content—0.0 to 0.5 percent

Montevallo Series

MLRA: 128
Map unit(s):
MoC—Montevallo channery silt loam, 5 to 12 percent slopes
MoD—Montevallo channery silt loam, 12 to 20 percent slopes
MoE—Montevallo channery silt loam, 20 to 35 percent slopes
Depth class: Shallow
Drainage class: Well drained
Saturated hydraulic conductivity (K_{sat}): Moderately high

Landform(s): Ridge on upland
Landform position(s) (three-dimensional): Crest and side slope
Parent material: Loamy-skeletal residuum weathered from acid shale
Elevation: 730 to 1,400 feet
Slope: 5 to 35 percent
Associated soils: Townley and Armuchee
Climatic data:
Mean annual precipitation: 51 to 67 inches
Mean annual air temperature: 44 to 69 degrees F
Frost-free period: 183 to 247 days
Taxonomic class: Loamy-skeletal, mixed, subactive, thermic, shallow Typic Dystrudepts

Typical Pedon

Location in survey area: Montevallo channery silt loam, 20 to 35 percent slopes; in Roane County; on Clax Gap Road, 3.1 miles from Highway 61, about 200 feet northeast; USGS Elverton, Tennessee topographic quadrangle; latitude 35 degrees 57 minutes 12.00 seconds north and longitude 84 degrees 27 minutes 27.00 seconds west; UTM Zone 16, 729308 meters easting, 3981761 meters northing; NAD83. (Colors are for moist soil unless otherwise noted.)

A—0 to 5 centimeters (0.0 to 2.0 inches); brown (10YR 4/3) channery silt loam; weak fine granular structure; very friable; common fine and common medium roots throughout; 30 percent shale channers; strongly acid, pH 5.0; clear smooth boundary.
Bw—5 to 38 centimeters (2.0 to 15.0 inches); yellowish brown (10YR 5/4) extremely channery silt loam; weak fine subangular blocky structure; friable; common fine and common medium roots throughout; 75 percent shale channers; very strongly acid, pH 4.5; diffuse wavy boundary.
Cr—38 to 63 centimeters (15.0 to 25.0 inches); weathered acid shale bedrock.

Range in Characteristics

Depth to restrictive feature: 10 to 20 inches to paralithic bedrock
Surface fragments: None
Seasonal high water table (depth): Greater than 6 feet

A horizon:
Hue—7.5YR or 10YR
Value—3 to 5
Chroma—2 to 4
Texture—channery silt loam
Reaction—pH 4.5 to 6.0
Organic matter content—0.5 to 2.0 percent

Bw horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 8
Texture—extremely channery silt loam, very channery silt loam, extremely channery loam
Reaction—pH 4.5 to 6.0
Organic matter content—0.0 to 0.5 percent

Cr horizon(s):
Texture—weathered acid shale bedrock

Pailo Series

MLRA: 128
Map unit(s):
FuB—Fullerton-Pailo complex, 2 to 5 percent slopes
FuC—Fullerton-Pailo complex, 5 to 12 percent slopes
FuD—Fullerton-Pailo complex, 12 to 20 percent slopes
FuE—Fullerton-Pailo complex, 20 to 35 percent slopes
Depth class: Very deep
Drainage class: Somewhat excessively drained
Saturated hydraulic conductivity (K_{sat}): High
Landform(s): Ridge on upland
Landform position(s) (three-dimensional): Crest and side slope
Parent material: Gravelly residuum weathered from cherty limestone or gravelly creep deposits over limestone or gravelly residuum weathered from cherty limestone
Elevation: 730 to 1,400 feet
Slope: 2 to 35 percent
Associated soils: Fullerton, Dewey, and Minvale
Climatic data:
Mean annual precipitation: 51 to 67 inches
Mean annual air temperature: 44 to 69 degrees F
Frost-free period: 183 to 247 days
Taxonomic class: Loamy-skeletal, siliceous, semiactive, thermic Typic Paleudults

Typical Pedon

Location in survey area: Pailo gravelly silt loam in an area of Fullerton-Pailo complex, 25 to 35 percent slopes; in Anderson County; on the east side of Wittaker Hollow Road, about 0.5 mile southeast of the junction of Wittaker Hollow Road and Island Ford Road; USGS Norris, Tennessee topographic quadrangle; latitude 36 degrees 13 minutes 47.00 seconds north and longitude 84 degrees 6 minutes 40.00 seconds west; UTM Zone 16, 759645 meters easting, 4013299 meters northing; NAD83. (Colors are for moist soil unless otherwise noted.)

A—0 to 13 centimeters (0.0 to 5.0 inches); brown (10YR 4/3) gravelly silt loam; moderate medium granular structure; very friable; many fine, common medium, and common coarse roots throughout; 30 percent chert gravel; moderately acid, pH 5.5; clear smooth boundary.

BE—13 to 38 centimeters (5.0 to 15.0 inches); yellowish brown (10YR 5/4) gravelly silt loam; weak fine subangular blocky structure; very friable; common fine and common medium roots throughout; 30 percent chert gravel; moderately acid, pH 5.5; clear smooth boundary.

Bt1—38 to 76 centimeters (15.0 to 30.0 inches); yellowish brown (10YR 5/8) very gravelly silty clay loam; weak medium subangular blocky structure; friable; common fine and common medium roots throughout; few discontinuous faint yellowish brown (10YR 5/6) clay films on all faces of peds; 40 percent chert gravel; very strongly acid, pH 4.5; clear smooth boundary.

Bt2—76 to 101 centimeters (30.0 to 40.0 inches); strong brown (7.5YR 5/6) very gravelly silty clay loam; few fine distinct spherical brownish yellow (10YR 6/6) mottles; moderate medium subangular blocky structure; friable; common fine and common medium roots throughout; common discontinuous distinct brownish yellow (10YR 6/8) clay films on all faces of peds and on surfaces along pores; 50 percent chert gravel; very strongly acid, pH 4.5; clear smooth boundary.

2Bt3—101 to 127 centimeters (40.0 to 50.0 inches); strong brown (7.5YR 5/8) gravelly clay; common medium distinct spherical yellowish red (5YR 5/6) mottles; moderate medium subangular blocky structure; firm; common fine and common

medium roots throughout; many discontinuous faint strong brown (7.5YR 5/6) clay films on all faces of peds and on surfaces along pores; 25 percent chert gravel; very strongly acid, pH 4.5; clear smooth boundary.

2Bt4—127 to 203 centimeters (50.0 to 80 inches); 60 percent yellowish red (5YR 5/8) gravelly clay; 20 percent very coarse faint spherical strong brown (7.5YR 5/8) and 20 percent coarse prominent spherical brownish yellow (10YR 6/6) mottles; weak medium angular blocky structure; firm; common fine roots throughout; many continuous faint strong brown (7.5YR 5/6) clay films on all faces of peds and on surfaces along pores; 23 percent chert gravel and 2 percent chert cobbles; very strongly acid, pH 4.5.

Range in Characteristics

Depth to restrictive feature: Greater than 80 inches
Surface fragments: None
Seasonal high water table (depth): Greater than 6 feet

A horizon:
Hue—10YR
Value—3 or 4
Chroma—2 to 4
Texture—gravelly silt loam, gravelly loam
Reaction—pH 3.6 to 7.0
Organic matter content—1.0 to 2.0 percent

BE horizon (where present):
Hue—10YR or 7.5YR
Value—4 or 5
Chroma—3 or 4
Texture—gravelly loam, gravelly silt loam, cobbly silt loam
Reaction—pH 3.6 to 7.0
Organic matter content—0.0 to 0.5 percent

Bt horizon:
Hue—7.5YR or 10YR
Value—5
Chroma—6 to 8
Mottles—in shades of red or brown
Texture—very gravelly silty clay loam, very gravelly loam, very gravelly clay loam
Reaction—pH 3.6 to 5.5
Organic matter content—0.0 to 0.5 percent

2Bt horizon:
Hue—7.5YR or 5YR
Value—4 or 5
Chroma—6 to 8
Mottles—in shades of red or brown
Texture—very gravelly clay, gravelly clay
Reaction—pH 3.6 to 5.5
Organic matter content—0.0 to 0.5 percent

Petros Series

MLRA: 125
Map unit(s):
GpE—Gilpin-Petros complex, 20 to 35 percent slopes

GpF—Gilpin-Petros complex, 35 to 80 percent slopes
GsF—Gilpin-Bouldin-Petros complex, 25 to 80 percent slopes, very stony

Depth class: Shallow
Drainage class: Excessively drained
Saturated hydraulic conductivity (K_{sat}): High
Landform(s): Mountain slope on mountains
Landform position(s) (three-dimensional): Mountain flank
Parent material: Loamy-skeletal residuum weathered from shale and siltstone
Elevation: 800 to 2,490 feet
Slope: 20 to 80 percent
Associated soils: Gilpin, Bouldin, and Shelocta
Climatic data:
Mean annual precipitation: 48 to 61 inches
Mean annual air temperature: 41 to 67 degrees F
Frost-free period: 163 to 214 days
Taxonomic class: Loamy-skeletal, mixed, semiactive, mesic, shallow Typic Dystrudepts

Typical Pedon

Location in survey area: Petros channery silt loam in an area of Gilpin-Bouldin-Petros complex, 25 to 75 percent slopes, very stony; in Scott County; on a north-facing mountain side about 1/2 mile southeast of Lone Mountain via a logging road, about 1,600 feet west of a USGS benchmark in Mill Creek, about 0.5 mile southeast of the community of Lone Mountain; USGS Norma, Tennessee topographic quadrangle; latitude 36 degrees 15 minutes 19.00 seconds north and longitude 84 degrees 29 minutes 3.00 seconds west; UTM Zone 16, 726035 meters easting, 4015199 meters northing; NAD83. (Colors are for moist soil unless otherwise noted.)

A—0 to 5 centimeters (0.0 to 2.0 inches); dark grayish brown (10YR 4/2) channery silt loam; weak fine granular structure; very friable; many fine and many medium roots throughout; 20 percent shale channers; strongly acid, pH 5.5; abrupt smooth boundary.

Bw1—5 to 20 centimeters (2.0 to 8.0 inches); yellowish brown (10YR 5/6) very channery silt loam; weak fine subangular blocky structure; common fine and common medium roots throughout; 50 percent shale channers; very strongly acid, pH 4.5; gradual smooth boundary.

Bw2—20 to 41 centimeters (8.0 to 16.0 inches); yellowish brown (10YR 5/6) extremely channery silt loam; weak fine subangular blocky structure; common fine, common medium, and few coarse roots throughout; 75 percent shale channers; very strongly acid, pH 4.5; abrupt smooth boundary.

Cr—41 to 66 centimeters (16.0 to 26.0 inches); weathered shale and siltstone bedrock.

Range in Characteristics

Depth to restrictive feature: 10 to 20 inches to paralithic bedrock
Surface fragments: None
Seasonal high water table (depth): Greater than 6 feet

A horizon:
Hue—10YR
Value—3 or 4
Chroma—2 or 3
Texture—channery silt loam
Reaction—pH 4.5 to 5.5
Organic matter content—0.5 to 2.0 percent

BE horizon (where present):
Color—similar to the horizons above and below
Texture—very channery silt loam
Reaction—pH 4.5 to 5.5
Organic matter content—0.0 to 1.0 percent

Bw horizon:
Hue—10YR or 7.5YR
Value—4 to 6
Chroma—4 to 6
Texture—extremely channery silt loam
Reaction—pH 4.5 to 5.5
Organic matter content—0.0 to 0.5 percent

Cr horizon:
Texture—weathered, rippable shale and siltstone bedrock

Philo Series

MLRA: 125
Map unit(s):
Pp—Pope-Philo complex, frequently flooded
Depth class: Very deep
Drainage class: Moderately well drained
Saturated hydraulic conductivity (K_{sat}): Moderately high
Landform(s): Flood plain and valley
Parent material: Coarse-loamy alluvium derived from sandstone and shale
Elevation: 800 to 2,490 feet
Slope: 0 to 3 percent
Associated soils: Pope, Ealy, and Craigsville
Climatic data:
Mean annual precipitation: 48 to 61 inches
Mean annual air temperature: 41 to 67 degrees F
Frost-free period: 163 to 214 days
Taxonomic class: Coarse-loamy, mixed, active, mesic Fluvaquentic Dystrudepts

Typical Pedon

Location in survey area: Philo loam in an area of Pope-Philo complex, frequently flooded; in Morgan County; 1,500 feet south from the intersection of Gobey Road and the Maden Branch bridge; USGS Gobey, Tennessee topographic quadrangle; latitude 36 degrees 9 minutes 36.00 seconds north and longitude 84 degrees 33 minutes 59.00 seconds west; UTM Zone 16, 718912 meters easting, 4004439 meters northing; NAD83. (Colors are for moist soil unless otherwise noted.)

Ap—0 to 15 centimeters (0.0 to 6.0 inches); brown (10YR 4/3) loam; moderate fine granular structure; very friable; common fine and common medium roots; strongly acid, pH 5.0; clear smooth boundary.

Bw1—15 to 69 centimeters (6.0 to 27.0 inches); dark yellowish brown (10YR 4/4) loam; weak fine subangular blocky structure; friable; common fine and common medium roots; very strongly acid, pH 4.5; gradual wavy boundary.

Bw2—69 to 91 centimeters (27.0 to 36.0 inches); dark yellowish brown (10YR 4/4) loam; weak medium subangular blocky structure; friable; common fine and common medium roots; few fine distinct light brownish gray (10YR 6/2) iron

depletions infused into matrix along faces of peds and few medium prominent strong brown (7.5YR 5/6) masses of oxidized iron infused into matrix along faces of peds; 5 percent sandstone pebbles; very strongly acid, pH 4.5; gradual wavy boundary.

C—91 to 122 centimeters (36.0 to 48.0 inches); yellowish brown (10YR 5/4) sandy loam; massive; very friable; few medium prominent strong brown (7.5YR 5/6) masses of oxidized iron infused into matrix along faces of peds and common medium distinct light brownish gray (10YR 6/2) iron depletions infused into matrix along faces of peds; 10 percent sandstone pebbles; very strongly acid, pH 4.5; clear smooth boundary.

Cg—122 to 203 centimeters (48.0 to 80.0 inches); gray (10YR 5/1) gravelly sandy loam; massive; very friable; 11 percent medium prominent yellowish red (5YR 5/6) masses of oxidized iron infused into matrix along faces of peds; 20 percent sandstone gravel; very strongly acid, pH 4.5.

Range in Characteristics

Depth to restrictive feature: Greater than 80 inches
Surface fragments: None
Seasonal high water table: January, February, March, April, December
Depth to top of water table: 18 to 36 inches

Ap horizon:
Hue—10YR
Value—4 or 5
Chroma—2 to 4
Texture—loam, silt loam
Reaction—pH 3.6 to 5.5
Organic matter content—1.0 to 4.0 percent

Bw horizon:
Hue—10YR or 7.5YR
Value—4 or 5
Chroma—3 to 6
Redoximorphic features—in shades of brown, gray, or red; common in most pedons
Texture—sandy loam, fine sandy loam, loam
Reaction—pH 4.5 to 6.0
Organic matter content—0.0 to 0.5 percent

C horizon:
Hue—10YR
Value—4 or 6
Chroma—2 to 4
Texture—gravelly sandy loam, sandy loam, fine sandy loam
Reaction—pH 4.5 to 6.0
Organic matter content—0.0 to 0.5 percent

Cg horizon:
Hue—7.5YR to 2.5Y
Value—4 or 6
Chroma—1 to 8
Texture—gravelly sandy loam, fine sandy loam, loam, silt loam
Reaction—pH 4.5 to 6.0
Organic matter content—0.0 to 0.5 percent

Pope Series

MLRA: 125
Map unit(s):
Pp—Pope-Philo complex, frequently flooded
Depth class: Very deep
Drainage class: Well drained
Saturated hydraulic conductivity (K_{sat}): Moderately high
Landform(s): Flood plain in valley
Parent material: Coarse-loamy alluvium derived from sandstone and shale
Elevation: 800 to 2,490 feet
Slope: 0 to 3 percent
Associated soils: Philo, Ealy, and Craigsville
Climatic data:
Mean annual precipitation: 48 to 61 inches
Mean annual air temperature: 41 to 67 degrees F
Frost-free period: 163 to 214 days
Taxonomic class: Coarse-loamy, mixed, active, mesic Fluventic Dystrudepts

Typical Pedon

Location in survey area: Pope loam in an area of Pope-Philo complex, frequently flooded; in Morgan County; 1,000 feet south from the intersection of Gobey Road and the Maden Branch bridge; USGS Gobey, Tennessee topographic quadrangle; latitude 36 degrees 9 minutes 36.00 seconds north and longitude 84 degrees 33 minutes 59.00 seconds west; UTM Zone 16, 718912 meters easting, 4004439 meters northing; NAD83. (Colors are for moist soil unless otherwise noted.)

Ap—0 to 13 centimeters (0.0 to 5.0 inches); brown (10YR 4/3) loam; weak fine granular structure; very friable; common fine and common medium roots; strongly acid, pH 5.0; clear smooth boundary.

BE—13 to 20 centimeters (5.0 to 8.0 inches); dark yellowish brown (10YR 4/4) loam; weak medium granular structure; very friable; common fine and common medium roots throughout; strongly acid, pH 5.0; clear wavy boundary.

Bw1—20 to 64 centimeters (8.0 to 25.0 inches); dark yellowish brown (10YR 4/6) loam; weak fine subangular blocky structure; very friable; common fine and common medium roots throughout; very strongly acid, pH 4.5; gradual wavy boundary.

Bw2—64 to 109 centimeters (25.0 to 43.0 inches); dark yellowish brown (10YR 4/6) loam; weak fine subangular blocky structure; very friable; common fine and common medium roots throughout; 5 percent sandstone gravel and pebbles; very strongly acid, pH 4.5; gradual wavy boundary.

C—109 to 203 centimeters (43.0 to 80.0 inches); yellowish brown (10YR 5/4) very gravelly sandy loam; few medium distinct dark yellowish brown (10YR 4/6) and 1 percent medium prominent strong brown (7.5YR 5/6) mottles; massive; very friable; 40 percent sandstone gravel and pebbles; very strongly acid, pH 4.5.

Range in Characteristics

Depth to restrictive feature: Greater than 80 inches
Surface fragments: None
Seasonal high water table (depth): Greater than 6 feet

Ap horizon:
Hue—10YR
Value—3 to 6
Chroma—3 to 6

Texture—loam, fine sandy loam
Reaction—pH 3.6 to 5.5
Organic matter content—1.0 to 4.0 percent

BE horizon:
Hue—10YR or 7.5YR
Value—3 to 6
Chroma—3 to 6
Texture—loam, fine sandy loam
Reaction—pH 3.6 to 5.5
Organic matter content—1.0 to 4.0 percent

Bw horizon:
Hue—10YR or 7.5YR
Value—4 or 5
Chroma—3 to 6
Texture—fine sandy loam, loam, sandy loam
Reaction—pH 3.6 to 5.5
Organic matter content—0.0 to 0.5 percent

C horizon:
Hue—10YR
Value—4 or 6
Chroma—2 to 4
Texture—very gravelly sandy loam, very gravelly fine sandy loam
Reaction—pH 3.6 to 5.5
Organic matter content—0.0 to 0.5 percent

Ramsey Series

MLRA: 125
Map unit(s):
LmD—Lily-Ramsey complex, 12 to 20 percent slopes
LmE—Lily-Ramsey complex, 20 to 35 percent slopes
RaD—Ramsey-Rock outcrop complex, 12 to 20 percent slopes
RaF—Ramsey-Rock outcrop complex, 20 to 50 percent slopes
Depth class: Very shallow and shallow
Drainage class: Somewhat excessively drained
Saturated hydraulic conductivity (K_{sat}): High
Landform(s): Hillslope on upland
Landform position(s) (three-dimensional): Side slope and mountain flank
Parent material: Loamy residuum weathered from sandstone
Elevation: 800 to 2,490 feet
Slope: 12 to 50 percent
Associated soils: Lily and Gilpin
Climatic data:
Mean annual precipitation: 48 to 61 inches
Mean annual air temperature: 41 to 67 degrees F
Frost-free period: 163 to 214 days
Taxonomic class: Loamy, siliceous, subactive, mesic Lithic Dystrudepts

Typical Pedon

Location in survey area: Ramsey loam in an area of Lily-Ramsey complex, 5 to 12 percent slopes; in Scott County; on a ridgetop in Scott State Forest, 1,000 feet northwest of the intersection of Bandy Creek Road and Tennessee Highway 297

(Leatherwood Road), about 1 mile by road northwest of the Leatherwood Ford on the Big South Fork of the Cumberland River; USGS Honey Creek, Tennessee topographic quadrangle; latitude 36 degrees 28 minutes 45.00 seconds north and longitude 84 degrees 40 minutes 54.00 seconds west; UTM Zone 16, 707691 meters easting, 4039596 meters northing; NAD83. (Colors are for moist soil unless otherwise noted.)

A—0 to 5 centimeters (0.0 to 2.0 inches); very dark grayish brown (10YR 3/2) loam; weak fine granular structure; very friable; many fine and many medium roots; 3 percent sandstone channers; strongly acid, pH 5.0; clear smooth boundary.

E—5 to 10 centimeters (2.0 to 4.0 inches); brown (10YR 4/3) loam; weak fine subangular blocky structure; very friable; many fine and many medium roots; 3 percent sandstone channers; strongly acid, pH 5.0; clear smooth boundary.

Bw1—10 to 25 centimeters (4.0 to 10.0 inches); yellowish brown (10YR 5/4) fine sandy loam; weak medium subangular blocky structure; very friable; common fine and common medium roots throughout; 5 percent sandstone channers; strongly acid, pH 5.0; gradual smooth boundary.

Bw2—25 to 41 centimeters (10.0 to 16.0 inches); yellowish brown (10YR 5/6) channery sandy loam; weak fine subangular blocky structure; very friable; common fine and common medium roots throughout; 19 percent sandstone channers; strongly acid, pH 5.0; abrupt smooth boundary.

R—41 to 51 centimeters (16.0 to 20.0 inches); sandstone bedrock.

Range in Characteristics

Depth to restrictive feature: 7 to 20 inches to lithic bedrock
Surface fragments: None
Seasonal high water table (depth): Greater than 6 feet

A and E horizons:
Hue—10YR
Value—3 to 5
Chroma—2 to 4
Texture—loam, gravelly sandy loam, fine sandy loam, sandy loam
Reaction—pH 4.5 to 6.0
Organic matter content—0.5 to 2.0 percent

Bw horizon:
Hue—10YR or 7.5YR
Value—4 to 6
Chroma—4 to 6
Texture—sandy loam, gravelly sandy loam
Reaction—pH 3.6 to 6.0
Organic matter content—0.0 to 0.5 percent

R horizon:
Texture—unweathered sandstone bedrock

Shady Series

MLRA: 128
Map unit(s):
Sd—Shady loam, occasionally flooded
SfB—Shady-Swafford-Urban land complex, 2 to 5 percent slopes
Depth class: Very deep
Drainage class: Well drained
Saturated hydraulic conductivity (K_{sat}): Moderately high
Landform(s): Stream terrace in valley

Parent material: Fine-loamy alluvium derived from limestone, sandstone, and shale
Elevation: 710 to 910 feet
Slope: 0 to 5 percent
Associated soils: Whitwell, Swafford, Hamblen, Capshaw, and Bloomingdale
Climatic data:
Mean annual precipitation: 51 to 67 inches
Mean annual air temperature: 44 to 69 degrees F
Frost-free period: 183 to 247 days
Taxonomic class: Fine-loamy, mixed, subactive, thermic Typic Hapludults

Typical Pedon

Location in survey area: Shady loam, occasionally flooded; in Roane County; on Highway 72 South turn right onto Highway 322 South to Luttrell, travel approximately 4 miles, turn right onto Johnson Road, travel 1 mile, 80 feet northwest of the road along Paint Rock Creek; USGS Pattie Gap, Tennessee topographic quadrangle; latitude 35 degrees 41 minutes 23.00 seconds north and longitude 84 degrees 32 minutes 53.00 seconds west; UTM Zone 16, 721872 meters easting, 3952306 meters northing; NAD83. (Colors are for moist soil unless otherwise noted.)

Ap—0 to 15 centimeters (0.0 to 6.0 inches); brown (10YR 4/3) loam; weak medium granular structure; very friable; many fine and many medium roots throughout; 3 percent quartz and chert pebbles; moderately acid, pH 5.5; gradual smooth boundary.

Bt1—15 to 38 centimeters (6.0 to 15.0 inches); yellowish brown (10YR 5/6) clay loam; weak medium subangular blocky structure; friable; many fine and common medium roots throughout; 5 percent quartz and chert pebbles; strongly acid, pH 5.0; diffuse smooth boundary.

Bt2—38 to 66 centimeters (15.0 to 26.0 inches); strong brown (7.5YR 5/6) clay loam; moderate medium subangular blocky structure; friable; common fine and common medium roots throughout; 5 percent quartz and chert pebbles; strongly acid, pH 5.0; diffuse smooth boundary.

BC—66 to 97 centimeters (26.0 to 38.0 inches); yellowish brown (10YR 5/6) loam; weak fine subangular blocky structure; friable; common fine roots throughout; 10 percent quartz and chert pebbles; very strongly acid, pH 4.5; diffuse smooth boundary.

C—97 to 203 centimeters (38.0 to 80.0 inches); brownish yellow (10YR 6/6) gravelly fine sandy loam; massive; very friable; 25 percent quartz and chert pebbles; very strongly acid, pH 4.5.

Range in Characteristics

Depth to restrictive feature: Greater than 80 inches
Surface fragments: None
Seasonal high water table: January, February, March, December
Depth to top of water table: 60 to 72 inches

A or Ap horizon:
Hue—10YR
Value—3 or 4
Chroma—3 or 4
Texture—loam, fine sandy loam
Reaction—pH 4.5 to 6.5
Organic matter content—1.0 to 3.0 percent

B horizon:
Hue—7.5YR to 10YR

Value—4 or 5
Chroma—4 to 8
Texture—loam, sandy clay loam, clay loam
Reaction—pH 4.5 to 6.0
Organic matter content—0.0 to 0.5 percent

BC horizon (where present):
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—4 or 6
Texture—loam, sandy clay loam, clay loam
Reaction—pH 4.5 to 6.0
Organic matter content—0.0 to 0.5 percent

C horizon (where present):
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—4 or 6
Texture—gravelly fine sandy loam
Reaction—pH 4.5 to 6.5
Organic matter content—0.0 to 0.5 percent

Shelocta Series

MLRA: 125
Map unit(s):
ShD—Shelocta silt loam, 12 to 20 percent slopes
Depth class: Very deep
Drainage class: Well drained
Saturated hydraulic conductivity (K_{sat}): Moderately high
Landform(s): Mountain slope on mountains
Landform position(s) (three-dimensional): Mountain base
Parent material: Fine-loamy colluvium derived from sandstone and shale
Elevation: 800 to 2,490 feet
Slope: 12 to 20 percent
Associated soils: Petros, Gilpin, and Bouldin
Climatic data:
Mean annual precipitation: 48 to 61 inches
Mean annual air temperature: 41 to 67 degrees F
Frost-free period: 163 to 214 days
Taxonomic class: Fine-loamy, mixed, active, mesic Typic Hapludults

Typical Pedon

Location in survey area: Shelocta silt loam, 20 to 35 percent slopes; in Scott County; on a north-facing side slope, 100 feet east of a logging road south of Green Branch and 600 feet southeast of the confluence of Smoky Creek and Green Branch, about 2.4 miles south of the community of Hembree; USGS Fork Mountain, Tennessee topographic quadrangle; latitude 36 degrees 12 minutes 8.00 seconds north and longitude 84 degrees 25 minutes 4.00 seconds west; UTM Zone 16, 732158 meters easting, 4009469 meters northing; NAD83. (Colors are for moist soil unless otherwise noted.)

A—0 to 8 centimeters (0.0 to 3.0 inches); dark brown (10YR 3/3) silt loam; weak fine

granular structure; very friable; common fine and common medium roots throughout; strongly acid, pH 5.0; abrupt smooth boundary.

BE—8 to 25 centimeters (3.0 to 10.0 inches); yellowish brown (10YR 5/4) silt loam; weak fine subangular blocky structure; friable; common fine and common medium roots throughout; strongly acid, pH 5.0; clear smooth boundary.

Bt1—25 to 53 centimeters (10.0 to 21.0 inches); yellowish brown (10YR 5/6) silty clay loam; weak fine subangular blocky structure; friable; common fine and common medium roots throughout; 15 percent discontinuous faint clay films on all faces of peds; 5 percent shale channers and 5 percent sandstone channers; strongly acid, pH 5.0; gradual smooth boundary.

Bt2—53 to 127 centimeters (21.0 to 50.0 inches); yellowish brown (10YR 5/6) channery silty clay loam; moderate medium subangular blocky structure; friable; common fine roots throughout; 15 percent discontinuous faint clay films on all faces of peds; 15 percent sandstone channers and 15 percent shale channers; strongly acid, pH 5.0; gradual smooth boundary.

Bt3—127 to 165 centimeters (50.0 to 65.0 inches); yellowish brown (10YR 5/6) very channery silty clay loam; moderate medium subangular blocky structure; friable; common fine roots throughout; 15 percent discontinuous faint clay films on all faces of peds; 30 percent shale channers; strongly acid, pH 5.0; gradual smooth boundary.

Cr—165 to 191 centimeters (65.0 to 75.0 inches); bedrock.

Range in Characteristics

Depth to restrictive feature: Greater than 80 inches
Surface fragments: None
Seasonal high water table (depth): Greater than 6 feet

A or Ap horizon:
Hue—10YR
Value—3 or 4
Chroma—2 or 3
Texture—silt loam, loam
Reaction—4.5 to 5.5
Organic matter content—0.5 to 5.0 percent

BE horizon (where present):
Hue—10YR
Value—4 or 5
Chroma—4 or 6
Texture—loam or silt loam
Reaction—pH 4.5 to 5.5
Organic matter content—0.5 to 5.0 percent

Bt horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—4 to 8
Texture—clay loam, silty clay loam, channery silty clay loam, channery silt loam
Reaction—pH 4.5 to 5.5
Organic matter content—0.0 to 0.5 percent

BC horizon (where present):
Color—similar to the Bt horizon
Texture—similar to the Bt horizon

Sunlight Series

MLRA: 128
Map unit(s):
AsC—Apison-Sunlight complex, 5 to 12 percent slopes
AsF—Apison-Sunlight complex, 25 to 60 percent slopes, very rocky
Depth class: Shallow
Drainage class: Well drained
Saturated hydraulic conductivity (K_{sat}): Moderately high
Landform(s): Hill in river valley
Landform position(s) (three-dimensional): Crest and side slope
Parent material: Loamy-skeletal residuum weathered from sandstone, shale, and siltstone
Elevation: 400 to 800 feet
Slope: 5 to 60 percent
Associated soils: Apison
Climatic data:
Mean annual precipitation: 44 to 65 inches
Mean annual air temperature: 45 to 69 degrees F
Frost-free period: 171 to 209 days
Taxonomic class: Loamy-skeletal, mixed, semiactive, thermic, shallow Inceptic Hapludults

Typical Pedon

Location in survey area: Sunlight sandy loam in an area of Sunlight-Apison complex, 12 to 25 percent slopes, very rocky; 80 miles west of Riceville on County Road 100, about 0.25 mile southwest on County Road 87, about 1,100 feet northwest to the top of a ridge, in a hardwood forest; USGS Riceville, Tennessee topographic quadrangle; latitude 35 degrees 27 minutes 26.00 seconds north and longitude 84 degrees 45 minutes 49.00 seconds west; NAD83. (Colors are for moist soil unless otherwise noted.)

Oi—1 inch to 0; slightly decomposed hardwood leaf litter.
A—0 to 8 centimeters (0.0 to 3.0 inches); dark reddish brown (2.5YR 3/3) channery sandy loam; moderate fine granular structure; very friable; common fine and few coarse roots; 25 percent shale channers; very strongly acid, pH 4.5; clear smooth boundary.
Bt—8 to 33 centimeters (3.0 to 13.0 inches); reddish brown (2.5YR 4/4) very channery loam; weak medium subangular blocky structure; friable; common fine and few medium roots; 45 percent shale channers; very strongly acid, pH 4.5; clear wavy boundary.
Cr—33 to 102 centimeters (13.0 to 40.0 inches); reddish, tilted, interbedded sandstone, siltstone, and shale bedrock.

Range in Characteristics

Depth to restrictive feature: 10 to 20 inches to paralithic bedrock
Surface fragments: None
Seasonal high water table (depth): Greater than 6 feet

A horizon:
Hue—2.5YR to 10YR
Value—3 or 4
Chroma—3 to 6
Texture—channery sandy loam

Reaction—pH 4.5 to 5.5
Organic matter content—1.0 to 2.0 percent

Bt horizon:
Hue—2.5YR to 10YR
Value—3 or 4
Chroma—4 to 8
Mottles (where present)—in shades of brown or yellow
Texture—channery loam, very channery clay loam, very channery silt loam, very channery loam
Reaction—pH 4.5 to 5.5
Organic matter content—0.0 to 0.5 percent

Cr horizon(s):
Texture—weathered sandstone, siltstone, and shale bedrock

Swafford Series

MLRA: 128
Map unit(s):
SfB—Shady-Swafford-Urban land complex, 2 to 5 percent slopes
SwB—Swafford loam, 2 to 5 percent slopes
Depth class: Shallow and moderately deep
Drainage class: Moderately well drained
Saturated hydraulic conductivity (K_{sat}): Moderately high
Landform(s): Stream terrace in valley
Landform position(s) (three-dimensional): Tread
Parent material: Fine-loamy alluvium derived from limestone and sandstone
Elevation: 710 to 910 feet
Slope: 2 to 5 percent
Associated soils: Whitwell, Hamblen, Shady, Capshaw, Bloomingdale, and Melvin
Climatic data:
Mean annual precipitation: 51 to 67 inches
Mean annual air temperature: 44 to 69 degrees F
Frost-free period: 183 to 247 days
Taxonomic class: Fine-loamy, siliceous, semiactive, thermic Fragiaquic Paleudults

Typical Pedon

Location in survey area: Swafford loam, 2 to 5 percent slopes; in Roane County; on Swan Pond Road then left onto Swan Pond Circle Road approximately 1.3 miles, then 800 feet southeast of the road; USGS Harriman, Tennessee topographic quadrangle; latitude 35 degrees 55 minutes 47.00 seconds north and longitude 84 degrees 30 minutes 27.00 seconds west; UTM Zone 16, 724865 meters easting, 3979025 meters northing; NAD83. (Colors are for moist soil unless otherwise noted.)

Ap—0 to 10 centimeters (0.0 to 4.0 inches); brown (10YR 4/3) loam; weak fine subangular blocky structure; friable; common fine roots; 5 percent quartz pebbles and chert gravel; very slightly acid, pH 6.5; clear smooth boundary.

BE—10 to 31 centimeters (4.0 to 12.0 inches); yellowish brown (10YR 5/4) loam; weak medium subangular blocky structure; friable; common very fine roots; 5 percent quartz pebbles and chert gravel; very slightly acid, pH 6.5; diffuse smooth boundary.

Bt—31 to 66 centimeters (12.0 to 26.0 inches); yellowish brown (10YR 5/6) clay loam; 15 percent medium faint light yellowish brown (10YR 6/4) mottles; moderate medium subangular blocky structure; friable; common very fine roots; 10 percent

quartz pebbles and chert gravel; very slightly acid, pH 6.5; diffuse smooth boundary.

Btx—66 to 102 centimeters (26.0 to 40.0 inches); yellowish brown (10YR 5/6) exterior clay loam; weak coarse prismatic structure; firm; 40 to 60 percent brittleness; common very fine roots; common fine tubular and common medium tubular pores; few discontinuous faint clay films on all faces of peds; common medium distinct pinkish gray (7.5YR 6/2) iron depletions, common fine prominent yellowish red (5YR 5/8) masses of oxidized iron, and many medium manganese masses; 5 percent quartz pebbles and chert gravel; moderately acid, pH 5.5; diffuse smooth boundary.

BC—102 to 203 centimeters (40.0 to 80 inches); strong brown (7.5YR 5/8) exterior clay loam; weak medium subangular blocky structure; friable; common fine distinct yellowish red (5YR 5/8) masses of oxidized iron and common medium prominent pinkish gray (7.5YR 6/2) iron depletions; 10 percent quartz and chert pebbles; very strongly acid, pH 4.5.

Range in Characteristics

Depth to restrictive feature: 18 to 36 inches to fragipan
Surface fragments: None
Seasonal high water table: January, February, March
Depth to top of water table: 24 to 36 inches

A or Ap horizon:
Hue—10YR
Value—3 to 5
Chroma—3 to 6
Texture—silt loam or loam
Reaction—pH 3.6 to 5.5
Organic matter content—0.5 to 4.0 percent

BE horizon (where present):
Hue—10YR
Value—4 or 5
Chroma—4 or 6
Texture—loam or silt loam
Reaction—pH 3.6 to 5.5
Organic matter content—0.5 to 4.0 percent

Bt horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—4 to 8
Texture—clay loam, loam, silt loam
Reaction—pH 4.5 to 6.0
Organic matter content—0.1 to 0.5 percent

Btx horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—4 to 8
Texture—loam, silty clay loam, clay loam
Reaction—pH 4.5 to 5.5
Organic matter content—0.0 to 0.5 percent

BC or C horizon (where present):
Hue—7.5YR or 10YR
Value—5 or 6

Chroma—2 to 8
Texture—fine sandy loam, loam, clay loam
Reaction—pH 4.5 to 5.5
Organic matter content—0.0 to 0.5 percent
Other characteristics—horizon may be mottled in shades of yellow, brown, or gray without a dominant color

Tasso Series

MLRA: 128
Map unit(s):
TaB—Tasso loam, 2 to 5 percent slopes
TaC—Tasso loam, 5 to 12 percent slopes
Depth class: Shallow and moderately deep
Drainage class: Well drained
Saturated hydraulic conductivity (K_{sat}): Moderately high
Landform(s): Hillslope on upland
Landform position(s) (three-dimensional): Base slope
Parent material: Fine-loamy colluvium and/or alluvium over residuum weathered from limestone and shale or old alluvium
Elevation: 730 to 1,400 feet
Slope: 2 to 12 percent
Associated soils: Pailo, Dewey, and Fullerton
Climatic data:
Mean annual precipitation: 46 to 67 inches
Mean annual air temperature: 44 to 69 degrees F
Frost-free period: 183 to 247 days
Taxonomic class: Fine-loamy, siliceous, semiactive, thermic Fragic Paleudults

Typical Pedon

Location in survey area: Tasso loam, 2 to 5 percent slopes; in McMinn County; 6.6 miles west on State Route 30 from the intersection of State Highway 30 and I-75, about 940 feet southwest of State Route 30 and 150 feet northeast of a stream, in a pastured area; USGS Riceville, Tennessee topographic quadrangle; latitude 35 degrees 29 minutes 9.00 seconds north and longitude 84 degrees 44 minutes 54.00 seconds west; UTM Zone 16, 704264 meters easting, 3929253 meters northing; NAD83. (Colors are for moist soil unless otherwise noted.)

Ap—0 to 23 centimeters (0.0 to 9.0 inches); dark yellowish brown (10YR 4/4) loam; moderate medium granular structure; friable; many fine roots; 5 percent chert fragments; neutral, pH 7.0; clear smooth boundary.
BA—23 to 38 centimeters (9.0 to 15.0 inches); dark yellowish brown (10YR 4/6) loam; common medium distinct yellowish brown (10Yr 5/4) mottles; weak fine subangular blocky structure; friable; common fine roots; 5 percent chert pebbles; neutral, pH 7.0; clear smooth boundary.
Bt—38 to 76 centimeters (15.0 to 30.0 inches); yellowish brown (10YR 5/6) clay loam; moderate medium subangular blocky structure; friable; few fine roots; few discontinuous faint clay films on all faces of peds; 10 percent chert gravel; common medium prominent iron-manganese concretions; moderately acid, pH 5.5; clear smooth boundary.
Btx—76 to 107 centimeters (30.0 to 42.0 inches); yellowish brown (10YR 5/8) gravelly clay; few fine prominent strong brown (7.5YR 5/6) mottles; weak medium angular blocky structure; friable; 40 to 50 percent brittleness; very few fine roots between peds; common distinct strong brown (7.5YR 5/6) clay films on all faces of peds;

common medium prominent light gray (2.5Y 7/1) iron depletions and common medium distinct iron-manganese concretions; 25 percent chert gravel; strongly acid, pH 5.0; clear smooth boundary.

2Bt—107 to 122 centimeters (42.0 to 48.0 inches); yellowish brown (10YR 6/8) clay; few fine prominent yellowish red (5YR 5/6) mottles; weak medium subangular blocky structure; friable; few discontinuous faint clay films on surfaces along pores and on all faces of peds; few medium distinct iron-manganese concretions and many medium distinct light brownish gray (10YR 6/2) iron depletions; 10 percent chert gravel; strongly acid, pH 5.0; clear smooth boundary.

2BC1—122 to 150 centimeters (48.0 to 59.0 inches); strong brown (7.5YR 5/6) clay; many medium prominent light yellowish brown (2.5Y 6/3) mottles; weak medium subangular blocky structure; friable; common medium prominent light brownish gray (2.5YR 6/2) iron depletions on faces of peds; 10 percent chert pebbles; strongly acid, pH 5.0; clear smooth boundary.

2BC2—150 to 157 centimeters (59.0 to 62.0 inches); strong brown (7.5YR 5/6) gravelly clay; weak coarse subangular blocky structure; firm; 25 percent chert pebbles; strongly acid, pH 5.0.

Range in Characteristics

Depth to restrictive feature: 18 to 36 inches to fragipan
Surface fragments: None
Seasonal high water table (depth): Greater than 6 feet

Ap horizon:
Hue—10YR
Value—3 to 5
Chroma—2 to 4
Texture—loam, silt loam
Reaction—pH 4.5 to 6.0
Organic matter content—0.5 to 2.0 percent

BA horizon:
Hue—7.5YR or 10YR
Value—3 to 5
Chroma—4 to 6
Texture—loam, silty clay loam, silt loam, clay loam
Reaction—pH 4.5 to 6.0
Organic matter content—0.0 to 0.5 percent

Bt horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—4 to 8
Texture—loam, silty clay loam, silt loam, clay loam
Reaction—pH 4.5 to 6.0
Organic matter content—0.0 to 0.5 percent

Btx horizon(s):
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—4 to 8
Texture—silty clay loam, clay loam, loam, gravelly clay, gravelly silty clay loam
Reaction—pH 4.5 to 5.5
Organic matter content—0.0 to 0.5 percent

2Bt and 2BC horizons:
Hue—2.5YR to 10YR

Value—4 to 6
Chroma—6 to 8
Texture—clay, gravelly clay, clay loam, silty clay loam
Reaction—pH 4.5 to 5.5
Organic matter content—0.0 to 0.5 percent

Townley Series

MLRA: 128
Map unit(s):
TeB2—Townley-Coile complex, 2 to 5 percent slopes, eroded
TeC—Townley silt loam, 5 to 12 percent slopes
TeD—Townley silt loam, 12 to 20 percent slopes
TeE—Townley silt loam, 20 to 35 percent slopes
TuD—Townley-Armuchee-Urban land complex, 5 to 20 percent slopes
TuE—Townley-Armuchee-Urban land complex, 20 to 35 percent slopes
Depth class: Moderately deep
Drainage class: Well drained
Saturated hydraulic conductivity (K_{sat}): Moderately low
Landform(s): Ridge on upland
Landform position(s) (three-dimensional): Crest and side slope
Parent material: Clayey residuum weathered from shale
Elevation: 730 to 1,400 feet
Slope: 2 to 35 percent
Associated soils: Armuchee, Montevallo, and Capshaw
Climatic data:
Mean annual precipitation: 51 to 67 inches
Mean annual air temperature: 44 to 69 degrees F
Frost-free period: 183 to 247 days
Taxonomic class: Fine, mixed, semiactive, thermic Typic Hapludults

Typical Pedon

Location in survey area: Townley silt loam, 5 to 12 percent slopes; in Roane County; travel on Highway 61/27 North, take first driveway to the right after taking Highway 61 northeast, travel 1 mile on the driveway, 700 feet northeast of the road on the eastern side of the railroad tracks; USGS Elverton, Tennessee topographic quadrangle; latitude 35 degrees 58 minutes 0.00 seconds north and longitude 84 degrees 29 minutes 29.00 seconds west; UTM Zone 16, 726213 meters easting, 3983161 meters northing; NAD83. (Colors are for moist soil unless otherwise noted.)

A—0 to 10 centimeters (0.0 to 4.0 inches); brown (10YR 4/3) silt loam; weak medium granular structure; friable; many fine and common medium roots throughout; 5 percent shale channers; moderately acid, pH 5.5; gradual smooth boundary.

BE—10 to 20 centimeters (4.0 to 8.0 inches); yellowish brown (10YR 5/4) silt loam; weak fine subangular blocky structure; friable; common fine and common medium roots; 5 percent shale channers; strongly acid, pH 5.0; diffuse smooth boundary.

Bt1—20 to 51 centimeters (8.0 to 20.0 inches); strong brown (7.5YR 5/6) silty clay loam; common medium distinct yellowish brown (10YR 5/6) mottles; moderate medium subangular blocky structure; friable; common fine roots; many continuous faint clay films on all faces of peds; 10 percent shale channers; strongly acid, pH 5.0; diffuse smooth boundary.

Bt2—51 to 76 centimeters (20.0 to 30.0 inches); yellowish red (5YR 5/8) silty clay; common medium prominent brownish yellow (10YR 6/6), common medium distinct strong brown (7.5YR 5/6), and common medium distinct red (2.5YR 4/6)

mottles; moderate medium subangular blocky structure; firm; common fine and common medium roots; many continuous faint clay films on all faces of peds; 10 percent shale channers; strongly acid, pH 5.0; diffuse smooth boundary.

BC—76 to 91 centimeters (30.0 to 36.0 inches); variegated 40 percent yellowish red (5YR 5/8) exterior, 30 percent brownish yellow (10YR 6/6) broken face, and 30 percent red (2.5YR 4/6) channery silty clay loam; weak medium subangular blocky structure; firm; 20 percent shale channers; very strongly acid, pH 4.5; diffuse smooth boundary.

Cr—91 to 117 centimeters (36.0 to 46.0 inches); weathered, acid shale bedrock.

Range in Characteristics

Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Surface fragments: None
Seasonal high water table (depth): Greater than 6 feet

A or Ap horizon:
Hue—10YR
Value—3 to 5
Chroma—2 to 4
Texture—silt loam, loam
Reaction—pH 3.6 to 5.5
Organic matter content—0.5 to 2.0 percent

BE or BA horizon (where present):
Hue—10YR or 7.5YR
Value—3 to 6
Chroma—3 to 6
Texture—silt loam, loam
Reaction—pH 3.6 to 5.5
Organic matter content—0.0 to 0.5 percent

Bt horizon:
Hue—2.5YR to 10YR
Value—4 to 6
Chroma—4 to 8
Texture—silty clay loam, silty clay, clay
Reaction—pH 3.6 to 5.5
Organic matter content—0.0 to 0.5 percent

BC or C horizon (where present):
Color—mottled in shades of brown, yellow, or red
Texture—channery silty clay loam, channery silty clay
Reaction—pH 4.5 to 5.5
Organic matter content—0.0 to 0.5 percent

Cr horizon:
Texture—weathered, acid shale bedrock

Waynesboro Series

MLRA: 128
Map unit(s):
WaB—Waynesboro loam, 2 to 5 percent slopes
WaC—Waynesboro loam, 5 to 12 percent slopes
WaD—Waynesboro loam, 12 to 20 percent slopes
WeD—Waynesboro-Etowah-Urban land complex, 5 to 20 percent slopes

Depth class: Very deep
Drainage class: Well drained
Saturated hydraulic conductivity (K_{sat}): Moderately high
Landform(s): Old high stream terrace on upland
Landform position(s) (two-dimensional): Summit and side slope
Parent material: Clayey alluvium derived from interbedded sedimentary rock
Elevation: 730 to 1,400 feet
Slope: 2 to 20 percent
Associated soils: Dewey and Etowah
Climatic data:
Mean annual precipitation: 51 to 67 inches
Mean annual air temperature: 44 to 69 degrees F
Frost-free period: 183 to 247 days
Taxonomic class: Fine, kaolinitic, thermic Typic Paleudults

Typical Pedon

Location in survey area: Waynesboro loam, 2 to 5 percent slopes; in Roane County; on Harriman Industrial Park Road 1.5 miles 75 feet south; USGS Harriman, Tennessee topographic quadrangle; latitude 35 degrees 56 minutes 42.00 seconds north and longitude 84 degrees 30 minutes 53.00 seconds west; UTM Zone 16, 724170 meters easting, 3980703 meters northing; NAD83. (Colors are for moist soil unless otherwise noted.)

Ap—0 to 15 centimeters (0.0 to 6.0 inches); dark yellowish brown (10YR 4/4) loam; moderate medium granular structure; very friable; many fine and many medium roots; slightly acid, pH 6.0; clear smooth boundary.
BA—15 to 28 centimeters (6.0 to 11.0 inches); strong brown (7.5YR 4/6) loam; weak fine subangular blocky structure; friable; common fine and common medium roots; slightly acid, pH 6.0; clear smooth boundary.
Bt1—28 to 51 centimeters (11.0 to 20.0 inches); yellowish red (5YR 5/8) clay loam; moderate medium subangular blocky structure; friable; common fine and common very fine roots; common discontinuous faint clay films on all faces of peds; strongly acid, pH 5.0; gradual smooth boundary.
Bt2—51 to 89 centimeters (20.0 to 35.0 inches); yellowish red (5YR 5/8) clay loam; moderate medium subangular blocky structure; friable; common very fine roots; many discontinuous faint clay films on all faces of peds; strongly acid, pH 5.0; gradual smooth boundary.
Bt3—89 to 122 centimeters (35.0 to 48.0 inches); red (2.5YR 4/8) clay; moderate medium subangular blocky structure; friable; many discontinuous distinct clay films on all faces of peds; strongly acid, pH 5.0; gradual smooth boundary.
Bt4—122 to 203 centimeters (48.0 to 80.0 inches); red (2.5YR 4/8) clay; common medium prominent brownish yellow (10YR 6/6) mottles; moderate medium subangular blocky structure; friable; many continuous distinct clay films on all faces of peds; strongly acid, pH 5.0.

Range in Characteristics

Depth to restrictive feature: Greater than 80 inches
Surface fragments: None
Seasonal high water table (depth): Greater than 6 feet

A horizon:
Hue—7.5YR or 10YR
Value—3 or 4
Chroma—3 to 6
Texture—loam

Reaction—pH 4.5 to 5.5
Organic matter content—0.5 to 2.0 percent

BA horizon (where present):
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—4 or 6
Texture—clay loam, loam, sandy clay loam
Reaction—pH 4.5 to 5.5
Organic matter content—0.2 to 1.0 percent

Bt horizon:
Hue—2.5YR to 7.5YR
Value—4 or 5
Chroma—6 or 8
Mottles—in some pedons in shades of brown or red
Texture—clay loam, clay, silty clay loam, sandy clay
Reaction—pH 4.5 to 5.5
Organic matter content—0.0 to 0.5 percent

Whitwell Series

MLRA: 128
Map unit(s):
WhB—Whitwell loam, 1 to 4 percent slopes, occasionally flooded
Depth class: Very deep
Drainage class: Moderately well drained
Saturated hydraulic conductivity (K_{sat}): Moderately high
Landform(s): Low stream terrace in valley
Parent material: Fine-loamy alluvium derived from interbedded sedimentary rock
Elevation: 710 to 910 feet
Slope: 1 to 4 percent
Associated soils: Shady, Capshaw, Melvin, Bloomingdale, and Hamblen
Climatic data:
Mean annual precipitation: 51 to 67 inches
Mean annual air temperature: 44 to 69 degrees F
Frost-free period: 183 to 247 days
Taxonomic class: Fine-loamy, siliceous, semiactive, thermic Aquic Hapludults

Typical Pedon

Location in survey area: Whitwell loam, 1 to 4 percent slopes, occasionally flooded; in Roane County; on Dickey Valley Road, 9/10 of a mile south from Old Harriman Highway, 250 feet southeast of the road; USGS Elverton, Tennessee topographic quadrangle; latitude 35 degrees 56 minutes 39.00 seconds north and longitude 84 degrees 26 minutes 56.00 seconds west; UTM Zone 16, 730111 meters easting, 3980764 meters northing; NAD83. (Colors are for moist soil unless otherwise noted.)

Ap—0 to 13 centimeters (0.0 to 5.0 inches); brown (10YR 4/3) loam; weak fine granular structure; very friable; many fine and many medium roots; slightly acid, pH 6.0; clear smooth boundary.
BE—13 to 25 centimeters (5.0 to 10.0 inches); yellowish brown (10YR 5/4) loam; weak fine subangular blocky structure; very friable; many fine and common medium roots; moderately acid, pH 5.5; clear smooth boundary.
Bt1—25 to 45 centimeters (10.0 to 18.0 inches); yellowish brown (10YR 5/6) clay loam; weak medium subangular blocky structure; friable; common fine and

common medium roots; few fine prominent yellowish red (5YR 5/6) masses of oxidized iron; strongly acid, pH 5.0; diffuse smooth boundary.

Bt2—45 to 97 centimeters (18.0 to 38.0 inches); yellowish brown (10YR 5/6) clay loam; weak medium subangular blocky structure; friable; common medium prominent yellowish red (5YR 5/6) masses of oxidized iron and many medium prominent light brownish gray (2.5Y 6/2) iron depletions; strongly acid, pH 5.0; diffuse smooth boundary.

BC—97 to 122 centimeters (38.0 to 80.0 inches); light yellowish brown (10YR 6/4) loam; weak fine subangular blocky structure/massive; friable; common fine distinct yellowish brown (10YR 5/8) masses of oxidized iron and many medium prominent light gray (10YR 7/1) iron depletions; strongly acid, pH 5.0.

Range in Characteristics

Depth to restrictive feature: Greater than 80 inches
Surface fragments: None
Seasonal high water table: January, February, March, April, December
Depth to top of water table: 24 to 36 inches

A or Ap horizon:
Hue—10YR
Value—4
Chroma—2 to 4
Texture—loam
Reaction—pH 4.5 to 6.0
Organic matter content—1.0 to 3.0 percent

BE or BA horizon (where present):
Hue—10YR
Value—4 or 5
Chroma—3 or 4
Texture—loam
Reaction—pH 4.5 to 6.0
Organic matter content—1.0 to 3.0 percent

Bt horizon:
Hue—7.5YR or 10YR
Value—5 or 6
Chroma—4 to 8
Texture—clay loam, silt loam, loam
Reaction—pH 4.5 to 5.5
Organic matter content—0.0 to 1.0 percent

BC or CB horizon (where present):
Hue—7.5YR to 2.5Y
Value—5 or 6
Chroma—2 to 8
Texture—fine sandy loam or loam
Reaction—pH 4.5 to 5.5
Organic matter content—0.0 to 1.0 percent

C horizon (where present):
Hue—7.5YR to 2.5Y
Value—5 or 6
Chroma—2
Texture—loam or sandy loam
Reaction—pH 4.5 to 5.5
Organic matter content—0.0 to 1.0 percent

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Glossary

ABC soil. A soil having an A, a B, and a C horizon.

AC soil. A soil having only an A and a C horizon. Commonly, such soil formed in recent alluvium or on steep, rocky slopes.

Aeration, soil. The exchange of air in soil with air from the atmosphere. The air in a well aerated soil is similar to that in the atmosphere; the air in a poorly aerated soil is considerably higher in carbon dioxide and lower in oxygen.

Aggregate, soil. Many fine particles held in a single mass or cluster. Natural soil aggregates, such as granules, blocks, or prisms, are called peds. Clods are aggregates produced by tillage or logging.

Alluvial cone. The material washed down the sides of mountains and hills by ephemeral streams and deposited at the mouth of gorges in the form of a moderately steep, conical mass descending equally in all directions from the point of issue.

Alluvial fan. The fanlike deposit of a stream where it issues from a gorge upon a plain or of a tributary stream near or at its junction with its main stream.

Alluvium. Material, such as sand, silt, or clay, deposited on land by streams.

Alpha,alpha-dipyridyl. A dye that when dissolved in 1N ammonium acetate is used to detect the presence of reduced iron (Fe II) in the soil. A positive reaction indicates a type of redoximorphic feature.

Animal unit month (AUM). The amount of forage required by one mature cow of approximately 1,000 pounds weight, with or without a calf, for 1 month.

Aquic conditions. Current soil wetness characterized by saturation, reduction, and redoximorphic features.

Argillic horizon. A subsoil horizon characterized by an accumulation of illuvial clay.

Aspect. The direction in which a slope faces.

Association, soil. A group of soils or miscellaneous areas geographically associated in a characteristic repeating pattern and defined and delineated as a single map unit.

Available water capacity (available moisture capacity). The capacity of soils to hold water available for use by most plants. It is commonly defined as the difference between the amount of soil water at field moisture capacity and the amount at wilting point. It is commonly expressed as inches of water per inch of soil. The capacity, in inches, in a 60-inch profile or to a limiting layer is expressed as:

Very low	0 to 3
Low	3 to 6
Moderate	6 to 9
High	9 to 12
Very high	more than 12

Backslope. The position that forms the steepest and generally linear, middle portion of a hillslope. In profile, backslopes are commonly bounded by a convex shoulder above and a concave footslope below.

Basal area. The area of a cross section of a tree, generally referring to the section at breast height and measured outside the bark. It is a measure of stand density, commonly expressed in square feet.

Base saturation. The degree to which material having cation-exchange properties is saturated with exchangeable bases (sum of Ca, Mg, Na, and K), expressed as a percentage of the total cation-exchange capacity.

Base slope. A geomorphic component of hills consisting of the concave to linear (perpendicular to the contour) slope that, regardless of the lateral shape, forms an apron or wedge at the bottom of a hillside dominated by colluvium and slope-wash sediments (for example, slope alluvium).

Bedding planes. Fine strata, less than 5 millimeters thick, in unconsolidated alluvial, eolian, lacustrine, or marine sediment.

Bedding system. A drainage system made by plowing, grading, or otherwise shaping the surface of a flat field. It consists of a series of low ridges separated by shallow, parallel dead furrows.

Bedrock. The solid rock that underlies the soil and other unconsolidated material or that is exposed at the surface.

Bedrock-controlled topography. A landscape where the configuration and relief of the landforms are determined or strongly influenced by the underlying bedrock.

Bench terrace. A raised, level or nearly level strip of earth constructed on or nearly on a contour, supported by a barrier of rocks or similar material, and designed to make the soil suitable for tillage and to prevent accelerated erosion.

Bisequum. Two sequences of soil horizons, each of which consists of an illuvial horizon and the overlying eluvial horizons.

Bottom land. The normal flood plain of a stream, subject to flooding.

Boulders. Rock fragments larger than 2 feet (60 centimeters) in diameter.

Breaks. The steep and very steep broken land at the border of an upland summit that is dissected by ravines.

Breast height. An average height of 4.5 feet above the ground surface; the point on a tree where diameter measurements are ordinarily taken.

Brush management. Use of mechanical, chemical, or biological methods to make conditions favorable for reseeding or to reduce or eliminate competition from woody vegetation and thus allow understory grasses and forbs to recover. Brush management increases forage production and thus reduces the hazard of erosion. It can improve the habitat for some species of wildlife.

Cable yarding. A method of moving felled trees to a nearby central area for transport to a processing facility. Most cable yarding systems involve use of a drum, a pole, and wire cables in an arrangement similar to that of a rod and reel used for fishing. To reduce friction and soil disturbance, felled trees generally are reeled in while one end is lifted or the entire log is suspended.

California bearing ratio (CBR). The load-supporting capacity of a soil as compared to that of standard crushed limestone, expressed as a ratio. First standardized in California. A soil having a CBR of 16 supports 16 percent of the load that would be supported by standard crushed limestone, per unit area, with the same degree of distortion.

Canopy. The leafy crown of trees or shrubs. (See Crown.)

Canyon. A long, deep, narrow, very steep-sided valley with high, precipitous walls in an area of high local relief.

Capillary water. Water held as a film around soil particles and in tiny spaces between particles. Surface tension is the adhesive force that holds capillary water in the soil.

Catena. A sequence, or “chain,” of soils on a landscape that formed in similar kinds of parent material but have different characteristics as a result of differences in relief and drainage.

Cation. An ion carrying a positive charge of electricity. The common soil cations are calcium, potassium, magnesium, sodium, and hydrogen.

Cation-exchange capacity. The total amount of exchangeable cations that can be

held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. The term, as applied to soils, is synonymous with base-exchange capacity but is more precise in meaning.

Catsteps. Very small, irregular terraces on steep hillsides, especially in pasture, formed by the trampling of cattle or the slippage of saturated soil.

Cement rock. Shaly limestone used in the manufacture of cement.

Channery soil material. Soil material that has, by volume, 15 to 35 percent thin, flat fragments of sandstone, shale, slate, limestone, or schist as much as 6 inches (15 centimeters) along the longest axis. A single piece is called a channer.

Chemical treatment. Control of unwanted vegetation through the use of chemicals.

Chiseling. Tillage with an implement having one or more soil-penetrating points that shatter or loosen hard, compacted layers to a depth below normal plow depth.

Clay. As a soil separate, the mineral soil particles less than 0.002 millimeter in diameter. As a soil textural class, soil material that is 40 percent or more clay, less than 45 percent sand, and less than 40 percent silt.

Clay depletions. Low-chroma zones having a low content of iron, manganese, and clay because of the chemical reduction of iron and manganese and the removal of iron, manganese, and clay. A type of redoximorphic depletion.

Clay film. A thin coating of oriented clay on the surface of a soil aggregate or lining pores or root channels. Synonyms: clay coating, clay skin.

Claypan. A slowly permeable soil horizon that contains much more clay than the horizons above it. A claypan is commonly hard when dry and plastic or stiff when wet.

Climax plant community. The stabilized plant community on a particular site. The plant cover reproduces itself and does not change so long as the environment remains the same.

Coarse textured soil. Sand or loamy sand.

Cobble (or cobblestone). A rounded or partly rounded fragment of rock 3 to 10 inches (7.6 to 25 centimeters) in diameter.

Cobbly soil material. Material that has 15 to 35 percent, by volume, rounded or partially rounded rock fragments 3 to 10 inches (7.6 to 25 centimeters) in diameter. Very cobbly soil material has 35 to 60 percent of these rock fragments, and extremely cobbly soil material has more than 60 percent.

COLE (coefficient of linear extensibility). See Linear extensibility.

Colluvium. Soil material or rock fragments, or both, moved by creep, slide, or local wash and deposited at the base of steep slopes.

Complex slope. Irregular or variable slope. Planning or establishing terraces, diversions, and other water-control structures on a complex slope is difficult.

Complex, soil. A map unit of two or more kinds of soil or miscellaneous areas in such an intricate pattern or so small in area that it is not practical to map them separately at the selected scale of mapping. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas.

Concretions. Cemented bodies with crude internal symmetry organized around a point, a line, or a plane. They typically take the form of concentric layers visible to the naked eye. Calcium carbonate, iron oxide, and manganese oxide are common compounds making up concretions. If formed in place, concretions of iron oxide or manganese oxide are generally considered a type of redoximorphic concentration.

Conglomerate. A coarse-grained, clastic rock composed of rounded or subangular rock fragments more than 2 millimeters in diameter. It commonly has a matrix of sand and finer textured material. Conglomerate is the consolidated equivalent of gravel.

Conservation cropping system. Growing crops in combination with needed cultural and management practices. In a good conservation cropping system, the soil-improving crops and practices more than offset the effects of the soil-depleting

crops and practices. Cropping systems are needed on all tilled soils. Soil-improving practices in a conservation cropping system include the use of rotations that contain grasses and legumes and the return of crop residue to the soil. Other practices include the use of green manure crops of grasses and legumes, proper tillage, adequate fertilization, and weed and pest control.

Conservation tillage. A tillage system that does not invert the soil and that leaves a protective amount of crop residue on the surface throughout the year.

Consistence, soil. Refers to the degree of cohesion and adhesion of soil material and its resistance to deformation when ruptured. Consistence includes resistance of soil material to rupture and to penetration; plasticity, toughness, and stickiness of puddled soil material; and the manner in which the soil material behaves when subject to compression. Terms describing consistence are defined in the “Soil Survey Manual.”

Contour stripcropping. Growing crops in strips that follow the contour. Strips of grass or close-growing crops are alternated with strips of clean-tilled crops or summer fallow.

Control section. The part of the soil on which classification is based. The thickness varies among different kinds of soil, but for many it is that part of the soil profile between depths of 10 inches and 40 or 80 inches.

Corrosion. Soil-induced electrochemical or chemical action that dissolves or weakens concrete or uncoated steel.

Cover crop. A close-growing crop grown primarily to improve and protect the soil between periods of regular crop production, or a crop grown between trees and vines in orchards and vineyards.

Cropping system. Growing crops according to a planned system of rotation and management practices.

Crop residue management. Returning crop residue to the soil, which helps to maintain soil structure, organic matter content, and fertility and helps to control erosion.

Cross-slope farming. Deliberately conducting farming operations on sloping farmland in such a way that tillage is across the general slope.

Crown. The upper part of a tree or shrub, including the living branches and their foliage.

Culmination of the mean annual increment (CMAI). The average annual increase per acre in the volume of a stand. Computed by dividing the total volume of the stand by its age. As the stand increases in age, the mean annual increment continues to increase until mortality begins to reduce the rate of increase. The point where the stand reaches its maximum annual rate of growth is called the culmination of the mean annual increment.

Decreasers. The most heavily grazed climax range plants. Because they are the most palatable, they are the first to be destroyed by overgrazing.

Deferred grazing. Postponing grazing or resting grazing land for a prescribed period.

Depth, soil. Generally, the thickness of the soil over bedrock. Very deep soils are more than 60 inches deep over bedrock; deep soils, 40 to 60 inches; moderately deep, 20 to 40 inches; shallow, 10 to 20 inches; and very shallow, less than 10 inches.

Dip slope. A slope of the land surface, roughly determined by and approximately conforming to the dip of the underlying bedrock.

Diversion (or diversion terrace). A ridge of earth, generally a terrace, built to protect downslope areas by diverting runoff from its natural course.

Divided-slope farming. A form of field stripcropping in which crops are grown in a systematic arrangement of two strips, or bands, across the slope to reduce the hazard of water erosion. One strip is in a close-growing crop that provides protection from erosion, and the other strip is in a crop that provides less

protection from erosion. This practice is used where slopes are not long enough to permit a full stripcropping pattern to be used.

Drainage class (natural). Refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized—*excessively drained, somewhat excessively drained, well drained, moderately well drained, somewhat poorly drained, poorly drained,* and *very poorly drained*. These classes are defined in the "Soil Survey Manual."

Drainage, surface. Runoff, or surface flow of water, from an area.

Draw. A small stream valley that generally is more open and has broader bottom land than a ravine or gulch.

Ecological site. An area where climate, soil, and relief are sufficiently uniform to produce a distinct natural plant community. An ecological site is the product of all the environmental factors responsible for its development. It is typified by an association of species that differ from those on other ecological sites in kind and/or proportion of species or in total production.

Eluviation. The movement of material in true solution or colloidal suspension from one place to another within the soil. Soil horizons that have lost material through eluviation are eluvial; those that have received material are illuvial.

Endosaturation. A type of saturation of the soil in which all horizons between the upper boundary of saturation and a depth of 2 meters are saturated.

Ephemeral stream. A stream, or reach of a stream, that flows only in direct response to precipitation. It receives no long-continued supply from melting snow or other source, and its channel is above the water table at all times.

Episaturation. A type of saturation indicating a perched water table in a soil in which saturated layers are underlain by one or more unsaturated layers within 2 meters of the surface.

Erosion. The wearing away of the land surface by water, wind, ice, or other geologic agents and by such processes as gravitational creep.

Erosion (geologic). Erosion caused by geologic processes acting over long geologic periods and resulting in the wearing away of mountains and the building up of such landscape features as flood plains and coastal plains. Synonym: natural erosion.

Erosion (accelerated). Erosion much more rapid than geologic erosion, mainly as a result of human or animal activities or of a catastrophe in nature, such as a fire, that exposes the surface.

Erosion pavement. A layer of gravel or stones that remains on the surface after fine particles are removed by sheet or rill erosion.

Escarpment. A relatively continuous and steep slope or cliff breaking the general continuity of more gently sloping land surfaces and resulting from erosion or faulting. Synonym: scarp.

Fallow. Cropland left idle in order to restore productivity through accumulation of moisture. Summer fallow is common in regions of limited rainfall where cereal grain is grown. The soil is tilled for at least one growing season for weed control and decomposition of plant residue.

Fan terrace. A relict alluvial fan, no longer a site of active deposition, incised by younger and lower alluvial surfaces.

Fertility, soil. The quality that enables a soil to provide plant nutrients, in adequate amounts and in proper balance, for the growth of specified plants when light, moisture, temperature, tilth, and other growth factors are favorable.

Field moisture capacity. The moisture content of a soil, expressed as a percentage of the ovendry weight, after the gravitational, or free, water has drained away; the

field moisture content 2 or 3 days after a soaking rain; also called *normal field capacity, normal moisture capacity,* or *capillary capacity*.

Fill slope. A sloping surface consisting of excavated soil material from a road cut. It commonly is on the downhill side of the road.

Fine textured soil. Sandy clay, silty clay, or clay.

Firebreak. An area cleared of flammable material to stop or help control creeping or running fires. It also serves as a line from which to work and to facilitate the movement of firefighters and equipment. Designated roads also serve as firebreaks.

First bottom. The normal flood plain of a stream, subject to frequent or occasional flooding.

Flaggy soil material. Material that has, by volume, 15 to 35 percent flagstones. Very flaggy soil material has 35 to 60 percent flagstones, and extremely flaggy soil material has more than 60 percent flagstones.

Flagstone. A thin fragment of sandstone, limestone, slate, shale, or (rarely) schist 6 to 15 inches (15 to 38 centimeters) long.

Flood plain. A nearly level alluvial plain that borders a stream and is subject to flooding unless protected artificially.

Fluvial. Of or pertaining to rivers; produced by river action, as a fluvial plain.

Foothill. A steeply sloping upland that has relief of as much as 1,000 feet (300 meters) and fringes a mountain range or high-plateau escarpment.

Footslope. The position that forms the inner, gently inclined surface at the base of a hillslope. In profile, footslopes are commonly concave. A footslope is a transition zone between upslope sites of erosion and transport (shoulders and backslopes) and downslope sites of deposition (toeslopes).

Forb. Any herbaceous plant not a grass or a sedge.

Forest cover. All trees and other woody plants (underbrush) covering the ground in a forest.

Forest type. A stand of trees similar in composition and development because of given physical and biological factors by which it may be differentiated from other stands.

Fragipan. A loamy, brittle subsurface horizon low in porosity and content of organic matter and low or moderate in clay but high in silt or very fine sand. A fragipan appears cemented and restricts roots. When dry, it is hard or very hard and has a higher bulk density than the horizon or horizons above. When moist, it tends to rupture suddenly under pressure rather than to deform slowly.

Genesis, soil. The mode of origin of the soil. Refers especially to the processes or soil-forming factors responsible for the formation of the solum, or true soil, from the unconsolidated parent material.

Gleyed soil. Soil that formed under poor drainage, resulting in the reduction of iron and other elements in the profile and in gray colors.

Graded stripcropping. Growing crops in strips that grade toward a protected waterway.

Grassed waterway. A natural or constructed waterway, typically broad and shallow, seeded to grass as protection against erosion. Conducts surface water away from cropland.

Gravel. Rounded or angular fragments of rock as much as 3 inches (2 millimeters to 7.6 centimeters) in diameter. An individual piece is a pebble.

Gravelly soil material. Material that has 15 to 35 percent, by volume, rounded or angular rock fragments, not prominently flattened, as much as 3 inches (7.6 centimeters) in diameter.

Green manure crop (agronomy). A soil-improving crop grown to be plowed under in an early stage of maturity or soon after maturity.

Ground water. Water filling all the unblocked pores of the material below the water table.

Gully. A miniature valley with steep sides cut by running water and through which water ordinarily runs only after rainfall. The distinction between a gully and a rill is one of depth. A gully generally is an obstacle to farm machinery and is too deep to be obliterated by ordinary tillage; a rill is of lesser depth and can be smoothed over by ordinary tillage.

Hard bedrock. Bedrock that cannot be excavated except by blasting or by the use of special equipment that is not commonly used in construction.

Hardpan. A hardened or cemented soil horizon, or layer. The soil material is sandy, loamy, or clayey and is cemented by iron oxide, silica, calcium carbonate, or other substance.

Head out. To form a flower head.

Head slope. A geomorphic component of hills consisting of a laterally concave area of a hillside, especially at the head of a drainageway. The overland waterflow is converging.

High-residue crops. Such crops as small grain and corn used for grain. If properly managed, residue from these crops can be used to control erosion until the next crop in the rotation is established. These crops return large amounts of organic matter to the soil.

Hill. A natural elevation of the land surface, rising as much as 1,000 feet above surrounding lowlands, commonly of limited summit area and having a well defined outline; hillsides generally have slopes of more than 15 percent. The distinction between a hill and a mountain is arbitrary and is dependent on local usage.

Horizon, soil. A layer of soil, approximately parallel to the surface, having distinct characteristics produced by soil-forming processes. In the identification of soil horizons, an uppercase letter represents the major horizons. Numbers or lowercase letters that follow represent subdivisions of the major horizons. An explanation of the subdivisions is given in the “Soil Survey Manual.” The major horizons of mineral soil are as follows:

O horizon.—An organic layer of fresh and decaying plant residue.

A horizon.—The mineral horizon at or near the surface in which an accumulation of humified organic matter is mixed with the mineral material. Also, a plowed surface horizon, most of which was originally part of a B horizon.

E horizon.—The mineral horizon in which the main feature is loss of silicate clay, iron, aluminum, or some combination of these.

B horizon.—The mineral horizon below an A horizon. The B horizon is in part a layer of transition from the overlying A to the underlying C horizon. The B horizon also has distinctive characteristics, such as (1) accumulation of clay, sesquioxides, humus, or a combination of these; (2) prismatic or blocky structure; (3) redder or browner colors than those in the A horizon; or (4) a combination of these.

C horizon.—The mineral horizon or layer, excluding indurated bedrock, that is little affected by soil-forming processes and does not have the properties typical of the overlying soil material. The material of a C horizon may be either like or unlike that in which the solum formed. If the material is known to differ from that in the solum, an Arabic numeral, commonly a 2, precedes the letter C.

Cr horizon.—Soft, consolidated bedrock beneath the soil.

R layer.—Consolidated bedrock beneath the soil. The bedrock commonly underlies a C horizon, but it can be directly below an A or a B horizon.

Humus. The well decomposed, more or less stable part of the organic matter in mineral soils.

Hydrologic soil groups. Refers to soils grouped according to their runoff potential. The soil properties that influence this potential are those that affect the minimum

rate of water infiltration on a bare soil during periods after prolonged wetting when the soil is not frozen. These properties are depth to a seasonal high water table, the infiltration rate and permeability after prolonged wetting, and depth to a very slowly permeable layer. The slope and the kind of plant cover are not considered but are separate factors in predicting runoff.

Illuviation. The movement of soil material from one horizon to another in the soil profile. Generally, material is removed from an upper horizon and deposited in a lower horizon.

Impervious soil. A soil through which water, air, or roots penetrate slowly or not at all. No soil is absolutely impervious to air and water all the time.

Increasers. Species in the climax vegetation that increase in amount as the more desirable plants are reduced by close grazing. Increasers commonly are the shorter plants and the less palatable to livestock.

Infiltration. The downward entry of water into the immediate surface of soil or other material, as contrasted with percolation, which is movement of water through soil layers or material.

Infiltration capacity. The maximum rate at which water can infiltrate into a soil under a given set of conditions.

Infiltration rate. The rate at which water penetrates the surface of the soil at any given instant, usually expressed in inches per hour. The rate can be limited by the infiltration capacity of the soil or the rate at which water is applied at the surface.

Intake rate. The average rate of water entering the soil under irrigation. Most soils have a fast initial rate; the rate decreases with application time. Therefore, intake rate for design purposes is not a constant but is a variable depending on the net irrigation application. The rate of water intake, in inches per hour, is expressed as follows:

Less than 0.2	very low
0.2 to 0.4	low
0.4 to 0.75	moderately low
0.75 to 1.25	moderate
1.25 to 1.75	moderately high
1.75 to 2.5	high
More than 2.5	very high

Interfluve. An elevated area between two drainageways that sheds water to those drainageways.

Intermittent stream. A stream, or reach of a stream, that flows for prolonged periods only when it receives ground-water discharge or long, continued contributions from melting snow or other surface and shallow subsurface sources.

Invaders. On range, plants that encroach into an area and grow after the climax vegetation has been reduced by grazing. Generally, plants invade following disturbance of the surface.

Iron depletions. Low-chroma zones having a low content of iron and manganese oxide because of chemical reduction and removal, but having a clay content similar to that of the adjacent matrix. A type of redoximorphic depletion.

Irrigation. Application of water to soils to assist in production of crops. Methods of irrigation are:

Basin.—Water is applied rapidly to nearly level plains surrounded by levees or dikes.

Border.—Water is applied at the upper end of a strip in which the lateral flow of water is controlled by small earth ridges called border dikes, or borders.

Controlled flooding.—Water is released at intervals from closely spaced field ditches and distributed uniformly over the field.

Corrugation.—Water is applied to small, closely spaced furrows or ditches in fields of close-growing crops or in orchards so that it flows in only one direction.

Drip (or trickle).—Water is applied slowly and under low pressure to the surface of the soil or into the soil through such applicators as emitters, porous tubing, or perforated pipe.

Furrow.—Water is applied in small ditches made by cultivation implements. Furrows are used for tree and row crops.

Sprinkler.—Water is sprayed over the soil surface through pipes or nozzles from a pressure system.

Subirrigation.—Water is applied in open ditches or tile lines until the water table is raised enough to wet the soil.

Wild flooding.—Water, released at high points, is allowed to flow onto an area without controlled distribution.

Karst (topography). The relief of an area underlain by limestone that dissolves in differing degrees, thus forming numerous depressions or small basins.

Knoll. A small, low, rounded hill rising above adjacent landforms.

K_{sat}. Saturated hydraulic conductivity. (See Permeability.)

Landslide. The rapid downhill movement of a mass of soil and loose rock, generally when wet or saturated. The speed and distance of movement, as well as the amount of soil and rock material, vary greatly.

Leaching. The removal of soluble material from soil or other material by percolating water.

LEP (linear extensibility percent). The linear expression of the volume difference of natural soil fabric and $^1/_3$- or $^1/_{10}$-bar water content and oven dryness. The volume change is reported as percentage change for the whole soil.

Linear extensibility. Refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. Linear extensibility is used to determine the shrink-swell potential of soils. It is an expression of the volume change between the water content of the clod at $^1/_3$- or $^1/_{10}$-bar tension (33kPa or 10kPa tension) and oven dryness. Volume change is influenced by the amount and type of clay minerals in the soil. The volume change is the percent change for the whole soil. If it is expressed as a fraction, the resulting value is COLE, coefficient of linear extensibility.

Liquid limit. The moisture content at which the soil passes from a plastic to a liquid state.

Loam. Soil material that is 7 to 27 percent clay particles, 28 to 50 percent silt particles, and less than 52 percent sand particles.

Loess. Fine-grained material, dominantly of silt-sized particles, deposited by wind.

Low-residue crops. Such crops as corn used for silage, peas, beans, and potatoes. Residue from these crops is not adequate to control erosion until the next crop in the rotation is established. These crops return little organic matter to the soil.

Low strength. The soil is not strong enough to support loads.

Masses. Concentrations of substances in the soil matrix that do not have a clearly defined boundary with the surrounding soil material and cannot be removed as a discrete unit. Common compounds making up masses are calcium carbonate, gypsum or other soluble salts, iron oxide, and manganese oxide. Masses consisting of iron oxide or manganese oxide generally are considered a type of redoximorphic concentration.

Mechanical treatment. Use of mechanical equipment for seeding, brush management, and other management practices.

Medium textured soil. Very fine sandy loam, loam, silt loam, or silt.

Metamorphic rock. Rock of any origin altered in mineralogical composition, chemical composition, or structure by heat, pressure, and movement. Nearly all such rocks are crystalline.

Mineral soil. Soil that is mainly mineral material and low in organic material. Its bulk density is more than that of organic soil.

Minimum tillage. Only the tillage essential to crop production and prevention of soil damage.

Miscellaneous area. An area that has little or no natural soil and supports little or no vegetation.

MLRA (major land resource area). A broad geographic area that has a distinct combination of physiography, geology, climate, hydrology, soils, biological resources, and land use.

Moderately coarse textured soil. Coarse sandy loam, sandy loam, or fine sandy loam.

Moderately fine textured soil. Clay loam, sandy clay loam, or silty clay loam.

Mollic epipedon. A thick, dark, humus-rich surface horizon (or horizons) that has high base saturation and pedogenic soil structure. It may include the upper part of the subsoil.

Morphology, soil. The physical makeup of the soil, including the texture, structure, porosity, consistence, color, and other physical, mineral, and biological properties of the various horizons, and the thickness and arrangement of those horizons in the soil profile.

Mottling, soil. Irregular spots of different colors that vary in number and size. Descriptive terms are as follows: abundance—*few, common,* and *many;* size—*fine, medium,* and *coarse;* and contrast—*faint, distinct,* and *prominent*. The size measurements are of the diameter along the greatest dimension. *Fine* indicates less than 5 millimeters (about 0.2 inch); *medium,* from 5 to 15 millimeters (about 0.2 to 0.6 inch); and *coarse,* more than 15 millimeters (about 0.6 inch).

Mountain. A natural elevation of the land surface, rising more than 1,000 feet above surrounding lowlands, commonly of restricted summit area (relative to a plateau) and generally having steep sides. A mountain can occur as a single, isolated mass or in a group forming a chain or range.

Mudstone. Sedimentary rock formed by induration of silt and clay in approximately equal amounts.

Munsell notation. A designation of color by degrees of three simple variables—hue, value, and chroma. For example, a notation of 10YR 6/4 is a color with hue of 10YR, value of 6, and chroma of 4.

Neutral soil. A soil having a pH value of 6.6 to 7.3. (See Reaction, soil.)

Nodules. Cemented bodies lacking visible internal structure. Calcium carbonate, iron oxide, and manganese oxide are common compounds making up nodules. If formed in place, nodules of iron oxide or manganese oxide are considered types of redoximorphic concentrations.

Nose slope. A geomorphic component of hills consisting of the projecting end (laterally convex area) of a hillside. The overland waterflow is predominantly divergent.

Nutrient, plant. Any element taken in by a plant essential to its growth. Plant nutrients are mainly nitrogen, phosphorus, potassium, calcium, magnesium, sulfur, iron, manganese, copper, boron, and zinc obtained from the soil and carbon, hydrogen, and oxygen obtained from the air and water.

Organic matter. Plant and animal residue in the soil in various stages of decomposition. The content of organic matter in the surface layer is described as follows:

Very low	less than 0.5 percent
Low	0.5 to 1.0 percent
Moderately low	1.0 to 2.0 percent
Moderate	2.0 to 4.0 percent

High	4.0 to 8.0 percent
Very high	more than 8.0 percent

Outwash plain. A landform of mainly sandy or coarse textured material of glaciofluvial origin. An outwash plain is commonly smooth; where pitted, it generally is low in relief.

Pan. A compact, dense layer in a soil that impedes the movement of water and the growth of roots. For example, *hardpan, fragipan, claypan, plowpan,* and *traffic pan*.

Parent material. The unconsolidated organic and mineral material in which soil forms.

Ped. An individual natural soil aggregate, such as a granule, a prism, or a block.

Pedisediment. A thin layer of alluvial material that mantles an erosion surface and has been transported to its present position from higher-lying areas of the erosion surface.

Pedon. The smallest volume that can be called “a soil.” A pedon is three dimensional and large enough to permit study of all horizons. Its area ranges from about 10 to 100 square feet (1 square meter to 10 square meters), depending on the variability of the soil.

Percolation. The movement of water through the soil.

Permafrost. Layers of soil, or even bedrock, occurring in arctic or subarctic regions, in which a temperature below freezing has existed continuously for a long time.

Permeability. The quality of the soil that enables water or air to move downward through the profile. The rate at which a saturated soil transmits water is accepted as a measure of this quality. In soil physics, the rate is referred to as “saturated hydraulic conductivity,” which is defined in the “Soil Survey Manual.” In line with conventional usage in the engineering profession and with traditional usage in published soil surveys, this rate of flow continues to be expressed as “permeability.” Terms describing permeability, measured in inches per hour, are as follows:

Extremely slow	0.0 to 0.01 inch
Very slow	0.01 to 0.06 inch
Slow	0.06 to 0.2 inch
Moderately slow	0.2 to 0.6 inch
Moderate	0.6 inch to 2.0 inches
Moderately rapid	2.0 to 6.0 inches
Rapid	6.0 to 20 inches
Very rapid	more than 20 inches

Phase, soil. A subdivision of a soil series based on features that affect its use and management, such as slope, stoniness, and flooding.

pH value. A numerical designation of acidity and alkalinity in soil. (See Reaction, soil.)

Plasticity index. The numerical difference between the liquid limit and the plastic limit; the range of moisture content within which the soil remains plastic.

Plastic limit. The moisture content at which a soil changes from semisolid to plastic.

Plateau. An extensive upland mass with relatively flat summit area that is considerably elevated (more than 100 meters) above adjacent lowlands and separated from them on one or more sides by escarpments.

Playa. The generally dry and nearly level lake plain that occupies the lowest parts of closed depressional areas, such as those on intermontane basin floors. Temporary flooding occurs primarily in response to precipitation and runoff.

Plinthite. The sesquioxide-rich, humus-poor, highly weathered mixture of clay with quartz and other diluents. It commonly appears as red mottles, usually in platy, polygonal, or reticulate patterns. Plinthite changes irreversibly to an ironstone hardpan or to irregular aggregates on repeated wetting and drying, especially if it is exposed also to heat from the sun. In a moist soil, plinthite can be cut with a spade. It is a form of laterite.

Plowpan. A compacted layer formed in the soil directly below the plowed layer.

Ponding. Standing water on soils in closed depressions. Unless the soils are artificially drained, the water can be removed only by percolation or evapotranspiration.

Poorly graded. Refers to a coarse-grained soil or soil material consisting mainly of particles of nearly the same size. Because there is little difference in size of the particles, density can be increased only slightly by compaction.

Potential native plant community. See Climax plant community.

Potential rooting depth (effective rooting depth). Depth to which roots could penetrate if the content of moisture in the soil were adequate. The soil has no properties restricting the penetration of roots to this depth.

Prescribed burning. Deliberately burning an area for specific management purposes, under the appropriate conditions of weather and soil moisture and at the proper time of day.

Productivity, soil. The capability of a soil for producing a specified plant or sequence of plants under specific management.

Profile, soil. A vertical section of the soil extending through all its horizons and into the parent material.

Proper grazing use. Grazing at an intensity that maintains enough cover to protect the soil and maintain or improve the quantity and quality of the desirable vegetation. This practice increases the vigor and reproduction capacity of the key plants and promotes the accumulation of litter and mulch necessary to conserve soil and water.

Rangeland. Land on which the potential natural vegetation is predominantly grasses, grasslike plants, forbs, or shrubs suitable for grazing or browsing. It includes natural grasslands, savannas, many wetlands, some deserts, tundras, and areas that support certain forb and shrub communities.

Reaction, soil. A measure of acidity or alkalinity of a soil, expressed in pH values. A soil that tests to pH 7.0 is described as precisely neutral in reaction because it is neither acid nor alkaline. The degrees of acidity or alkalinity, expressed as pH values, are:

Ultra acid	less than 3.5
Extremely acid	3.5 to 4.4
Very strongly acid	4.5 to 5.0
Strongly acid	5.1 to 5.5
Moderately acid	5.6 to 6.0
Slightly acid	6.1 to 6.5
Neutral	6.6 to 7.3
Slightly alkaline	7.4 to 7.8
Moderately alkaline	7.9 to 8.4
Strongly alkaline	8.5 to 9.0
Very strongly alkaline	9.1 and higher

Red beds. Sedimentary strata that are mainly red and are made up largely of sandstone and shale.

Redoximorphic concentrations. Nodules, concretions, soft masses, pore linings, and other features resulting from the accumulation of iron or manganese oxide. An indication of chemical reduction and oxidation resulting from saturation.

Redoximorphic depletions. Low-chroma zones from which iron and manganese oxide or a combination of iron and manganese oxide and clay has been removed. These zones are indications of the chemical reduction of iron resulting from saturation.

Redoximorphic features. Redoximorphic concentrations, redoximorphic depletions,

reduced matrices, a positive reaction to alpha,alpha-dipyridyl, and other features indicating the chemical reduction and oxidation of iron and manganese compounds resulting from saturation.

Reduced matrix. A soil matrix that has low chroma in situ because of chemically reduced iron (Fe II). The chemical reduction results from nearly continuous wetness. The matrix undergoes a change in hue or chroma within 30 minutes after exposure to air as the iron is oxidized (Fe III). A type of redoximorphic feature.

Regolith. The unconsolidated mantle of weathered rock and soil material on the earth's surface; the loose earth material above the solid rock.

Relief. The elevations or inequalities of a land surface, considered collectively.

Residuum (residual soil material). Unconsolidated, weathered or partly weathered mineral material that accumulated as consolidated rock disintegrated in place.

Rill. A steep-sided channel resulting from accelerated erosion. A rill generally is a few inches deep and not wide enough to be an obstacle to farm machinery.

Road cut. A sloping surface produced by mechanical means during road construction. It is commonly on the uphill side of the road.

Rock fragments. Rock or mineral fragments having a diameter of 2 millimeters or more; for example, pebbles, cobbles, stones, and boulders.

Root zone. The part of the soil that can be penetrated by plant roots.

Runoff. The precipitation discharged into stream channels from an area. The water that flows off the surface of the land without sinking into the soil is called surface runoff. Water that enters the soil before reaching surface streams is called ground-water runoff or seepage flow from ground water.

Sand. As a soil separate, individual rock or mineral fragments from 0.05 millimeter to 2.0 millimeters in diameter. Most sand grains consist of quartz. As a soil textural class, a soil that is 85 percent or more sand and not more than 10 percent clay.

Sandstone. Sedimentary rock containing dominantly sand-sized particles.

Sapric soil material (muck). The most highly decomposed of all organic soil material. Muck has the least amount of plant fiber, the highest bulk density, and the lowest water content at saturation of all organic soil material.

Saprolite. Unconsolidated residual material underlying the soil and grading to hard bedrock below.

Saturation. Wetness characterized by zero or positive pressure of the soil water. Under conditions of saturation, the water will flow from the soil matrix into an unlined auger hole.

Scarification. The act of abrading, scratching, loosening, crushing, or modifying the surface to increase water absorption or to provide a more tillable soil.

Second bottom. The first terrace above the normal flood plain (or first bottom) of a river.

Sedimentary rock. Rock made up of particles deposited from suspension in water. The chief kinds of sedimentary rock are conglomerate, formed from gravel; sandstone, formed from sand; shale, formed from clay; and limestone, formed from soft masses of calcium carbonate. There are many intermediate types. Some wind-deposited sand is consolidated into sandstone.

Sequum. A sequence consisting of an illuvial horizon and the overlying eluvial horizon. (See Eluviation.)

Series, soil. A group of soils that have profiles that are almost alike. All the soils of a series have horizons that are similar in composition, thickness, and arrangement.

Shale. Sedimentary rock formed by the hardening of a clay deposit.

Sheet erosion. The removal of a fairly uniform layer of soil material from the land surface by the action of rainfall and surface runoff.

Shoulder. The position that forms the uppermost inclined surface near the top of a

hillslope. It is a transition from backslope to summit. The surface is dominantly convex in profile and erosional in origin.

Side slope. A geomorphic component of hills consisting of a laterally planar area of a hillside. The overland waterflow is predominantly parallel.

Silica. A combination of silicon and oxygen. The mineral form is called quartz.

Silica-sesquioxide ratio. The ratio of the number of molecules of silica to the number of molecules of alumina and iron oxide. The more highly weathered soils or their clay fractions in warm-temperate, humid regions, and especially those in the tropics, generally have a low ratio.

Silt. As a soil separate, individual mineral particles that range in diameter from the upper limit of clay (0.002 millimeter) to the lower limit of very fine sand (0.05 millimeter). As a soil textural class, soil that is 80 percent or more silt and less than 12 percent clay.

Siltstone. Sedimentary rock made up of dominantly silt-sized particles.

Similar soils. Soils that share limits of diagnostic criteria, behave and perform in a similar manner, and have similar conservation needs or management requirements for the major land uses in the survey area.

Sinkhole. A depression in the landscape where limestone has been dissolved.

Site index. A designation of the quality of a forest site based on the height of the dominant stand at an arbitrarily chosen age. For example, if the average height attained by dominant and codominant trees in a fully stocked stand at the age of 50 years is 75 feet, the site index is 75.

Slickensides. Polished and grooved surfaces produced by one mass sliding past another. In soils, slickensides may occur at the bases of slip surfaces on the steeper slopes; on faces of blocks, prisms, and columns; and in swelling clayey soils, where there is marked change in moisture content.

Slick spot. A small area of soil having a puddled, crusted, or smooth surface and an excess of exchangeable sodium. The soil generally is silty or clayey, is slippery when wet, and is low in productivity.

Slope. The inclination of the land surface from the horizontal. Percentage of slope is the vertical distance divided by horizontal distance, then multiplied by 100. Thus, a slope of 20 percent is a drop of 20 feet in 100 feet of horizontal distance. In this survey, classes for simple slopes are as follows:

Level	0 to 2 percent
Nearly level	0 to 3 percent
Very gently sloping	0 to 4 percent
Gently sloping	2 to 5 percent
Sloping	5 to 12 percent
Moderately steep	12 to 20 percent
Steep	20 to 45 percent
Very steep	45 percent and higher

Classes for complex slopes are as follows:

Level	0 to 2 percent
Nearly level	0 to 4 percent
Undulating	2 to 5 percent
Rolling	5 to 12 percent
Hilly	12 to 20 percent
Steep	20 to 45 percent
Very steep	45 percent and higher

Sodicity. The degree to which a soil is affected by exchangeable sodium. Sodicity is expressed as a sodium adsorption ratio (SAR) of a saturation extract, or the ratio of Na^+ to $Ca^{++} + Mg^{++}$. The degrees of sodicity and their respective ratios are:

Slight	less than 13:1
Moderate	13-30:1
Strong	more than 30:1

Sodium adsorption ratio (SAR). A measure of the amount of sodium (Na) relative to calcium (Ca) and magnesium (Mg) in the water extract from saturated soil paste. It is the ratio of the Na concentration divided by the square root of one-half of the Ca + Mg concentration.

Soft bedrock. Bedrock that can be excavated with trenching machines, backhoes, small rippers, and other equipment commonly used in construction.

Soil. A natural, three-dimensional body at the earth's surface. It is capable of supporting plants and has properties resulting from the integrated effect of climate and living matter acting on earthy parent material, as conditioned by relief over periods of time.

Soil separates. Mineral particles less than 2 millimeters in equivalent diameter and ranging between specified size limits. The names and sizes, in millimeters, of separates recognized in the United States are as follows:

Very coarse sand	2.0 to 1.0
Coarse sand	1.0 to 0.5
Medium sand	0.5 to 0.25
Fine sand	0.25 to 0.10
Very fine sand	0.10 to 0.05
Silt	0.05 to 0.002
Clay	less than 0.002

Solum. The upper part of a soil profile, above the C horizon, in which the processes of soil formation are active. The solum in soil consists of the A, E, and B horizons. Generally, the characteristics of the material in these horizons are unlike those of the material below the solum. The living roots and plant and animal activities are largely confined to the solum.

Stone line. A concentration of coarse fragments in a soil. Generally, it is indicative of an old weathered surface. In a cross section, the line may be one fragment or more thick. It generally overlies material that weathered in place and is overlain by recent sediment of variable thickness.

Stones. Rock fragments 10 to 24 inches (25 to 60 centimeters) in diameter if rounded or 15 to 24 inches (38 to 60 centimeters) in length if flat.

Stony. Refers to a soil containing stones in numbers that interfere with or prevent tillage.

Stripcropping. Growing crops in a systematic arrangement of strips or bands that provide vegetative barriers to wind erosion and water erosion.

Structure, soil. The arrangement of primary soil particles into compound particles or aggregates. The principal forms of soil structure are—*platy* (laminated), *prismatic* (vertical axis of aggregates longer than horizontal), *columnar* (prisms with rounded tops), *blocky* (angular or subangular), and *granular*. *Structureless* soils are either *single grained* (each grain by itself, as in dune sand) or *massive* (the particles adhering without any regular cleavage, as in many hardpans).

Stubble mulch. Stubble or other crop residue left on the soil or partly worked into the soil. It protects the soil from wind erosion and water erosion after harvest, during preparation of a seedbed for the next crop, and during the early growing period of the new crop.

Subsoil. Technically, the B horizon; roughly, the part of the solum below plow depth.

Subsoiling. Tilling a soil below normal plow depth, ordinarily to shatter a hardpan or claypan.

Substratum. The part of the soil below the solum.

Subsurface layer. Any surface soil horizon (A, E, AB, or EB) below the surface layer.

Summer fallow. The tillage of uncropped land during the summer to control weeds and allow storage of moisture in the soil for the growth of a later crop. A practice common in semiarid regions, where annual precipitation is not enough to produce a crop every year. Summer fallow is frequently practiced before planting winter grain.

Summit. The topographically highest position of a hillslope. It has a nearly level (planar or only slightly convex) surface.

Surface layer. The soil ordinarily moved in tillage, or its equivalent in uncultivated soil, ranging in depth from 4 to 10 inches (10 to 25 centimeters). Frequently designated as the “plow layer,” or the “Ap horizon.”

Surface soil. The A, E, AB, and EB horizons, considered collectively. It includes all subdivisions of these horizons.

Talus. Fragments of rock and other soil material accumulated by gravity at the foot of cliffs or steep slopes.

Taxadjuncts. Soils that cannot be classified in a series recognized in the classification system. Such soils are named for a series they strongly resemble and are designated as taxadjuncts to that series because they differ in ways too small to be of consequence in interpreting their use and behavior. Soils are recognized as taxadjuncts only when one or more of their characteristics are slightly outside the range defined for the family of the series for which the soils are named.

Terrace. An embankment, or ridge, constructed across sloping soils on the contour or at a slight angle to the contour. The terrace intercepts surface runoff so that water soaks into the soil or flows slowly to a prepared outlet. A terrace in a field generally is built so that the field can be farmed. A terrace intended mainly for drainage has a deep channel that is maintained in permanent sod.

Terrace (geologic). An old alluvial plain, ordinarily flat or undulating, bordering a river, a lake, or the sea.

Texture, soil. The relative proportions of sand, silt, and clay particles in a mass of soil. The basic textural classes, in order of increasing proportion of fine particles, are *sand, loamy sand, sandy loam, loam, silt loam, silt, sandy clay loam, clay loam, silty clay loam, sandy clay, silty clay,* and *clay*. The sand, loamy sand, and sandy loam classes may be further divided by specifying “coarse,” “fine,” or “very fine.”

Tilth, soil. The physical condition of the soil as related to tillage, seedbed preparation, seedling emergence, and root penetration.

Toeslope. The position that forms the gently inclined surface at the base of a hillslope. Toeslopes in profile are commonly gentle and linear and are constructional surfaces forming the lower part of a hillslope continuum that grades to valley or closed-depression floors.

Topsoil. The upper part of the soil, which is the most favorable material for plant growth. It is ordinarily rich in organic matter and is used to topdress roadbanks, lawns, and land affected by mining.

Trace elements. Chemical elements, for example, zinc, cobalt, manganese, copper, and iron, in soils in extremely small amounts. They are essential to plant growth.

Upland. Land at a higher elevation, in general, than the alluvial plain or stream terrace; land above the lowlands along streams.

Valley fill. In glaciated regions, material deposited in stream valleys by glacial meltwater. In nonglaciated regions, alluvium deposited by heavily loaded streams.

Variegation. Refers to patterns of contrasting colors assumed to be inherited from the parent material rather than to be the result of poor drainage.

Water bars. Smooth, shallow ditches or depressional areas that are excavated at an angle across a sloping road. They are used to reduce the downward velocity of water and divert it off and away from the road surface. Water bars can easily be driven over if constructed properly.

Weathering. All physical and chemical changes produced in rocks or other deposits at

or near the earth’s surface by atmospheric agents. These changes result in disintegration and decomposition of the material.

Well graded. Refers to soil material consisting of coarse-grained particles that are well distributed over a wide range in size or diameter. Such soil normally can be easily increased in density and bearing properties by compaction. Contrasts with poorly graded soil.

Wilting point (or permanent wilting point). The moisture content of soil, on an ovendry basis, at which a plant (specifically a sunflower) wilts so much that it does not recover when placed in a humid, dark chamber.

Windthrow. The uprooting and tipping over of trees by the wind.

Tables

Table 1.—Temperature and Precipitation

(Recorded in the period 1971-2000 at Rockwood, Tennessee)

Month	Temperature						Precipitation				
	Average daily maximum	Average daily minimum	Average daily	2 years in 10 will have-- Maximum temp. higher than--	2 years in 10 will have-- Minimum temp. lower than--	Average number of growing degree days*	Average	2 years in 10 will have-- Less than--	2 years in 10 will have-- More than--	Average number of days with 0.10 inch or more	Average snow-fall
	°F	°F	°F	°F	°F	Units	In	In	In		In
January--	45.8	25.5	35.6	68	-1	9	5.75	3.53	7.74	8	1.5
February-	50.9	27.4	39.1	74	4	16	4.90	3.30	6.36	7	1.5
March----	60.0	34.6	47.3	81	14	76	6.12	3.83	8.19	9	0.5
April----	69.8	42.3	56.1	88	25	222	4.58	2.47	6.43	8	0.2
May------	77.0	51.3	64.1	88	34	436	5.62	3.55	7.50	8	0.0
June-----	84.3	60.1	72.2	95	44	664	4.78	2.49	6.79	7	0.0
July-----	87.5	64.5	76.0	98	52	805	5.53	3.35	7.48	9	0.0
August---	86.6	63.1	74.8	96	52	769	4.37	2.68	5.88	7	0.0
September	81.1	56.6	68.8	94	38	565	3.93	2.13	5.51	6	0.0
October--	70.7	43.6	57.1	85	27	240	3.48	1.39	5.25	5	0.0
November-	59.4	35.0	47.2	79	18	72	5.17	3.39	6.78	7	0.0
December-	49.5	28.2	38.8	70	7	18	5.79	3.09	8.16	8	0.3
Yearly:											
Average	68.5	44.3	56.4	---	---	---	---	---	---	---	---
Extreme	107	-10	---	99	-3	---	---	---	---	---	---
Total--	---	---	---	---	---	3,891	60.01	51.49	66.93	89	4.0

* A growing degree day is a unit of heat available for plant growth. It can be calculated by adding the maximum and minimum daily temperatures, dividing the sum by 2, and subtracting the temperature below which growth is minimal for the principal crops in the area (50 degrees F).

Table 2.—Freeze Dates in Spring and Fall

(Recorded in the period 1971-2000 at Rockwood, Tennessee)

Probability	Temperature		
	24 °F or lower	28 °F or lower	32 °F or lower
Last freezing temperature in spring:			
1 year in 10 later than--	Apr. 1	Apr. 15	May 6
2 years in 10 later than--	Mar. 26	Apr. 9	Apr. 30
5 years in 10 later than--	Mar. 15	Mar. 30	Apr. 17
First freezing temperature in fall:			
1 year in 10 earlier than--	Oct. 31	Oct. 19	Oct. 2
2 years in 10 earlier than--	Nov. 6	Oct. 24	Oct. 8
5 years in 10 earlier than-	Nov. 18	Nov. 2	Oct. 18

Table 3.—Growing Season

(Recorded in the period 1971-2000 at Rockwood, Tennessee)

Probability	Daily minimum temperature during growing season		
	Higher than 24 °F	Higher than 28 °F	Higher than 32 °F
	Days	Days	Days
9 years in 10	221	198	158
8 years in 10	230	204	166
5 years in 10	247	217	183
2 years in 10	263	230	200
1 year in 10	272	236	208

Table 4.—Acreage and Proportionate Extent of the Soils

Map symbol	Soil name	Acres	Percent
AeC	Allen loam, 5 to 12 percent slopes	1,205	0.5
AeD	Allen loam, 12 to 20 percent slopes	727	0.3
AfD	Allen-Jefferson-Urban land complex, 5 to 20 percent slopes	648	0.3
AmC	Armuchee silt loam, 5 to 12 percent slopes	4,720	1.9
AmD	Armuchee silt loam, 12 to 20 percent slopes	2,976	1.2
AmE	Armuchee silt loam, 20 to 35 percent slopes	673	0.3
ANS	Area not surveyed, access denied	23,500	9.3
ApC	Apison-Sunlight complex, 5 to 12 percent slopes	4	*
ApF	Apison-Sunlight complex, 25 to 60 percent slopes, very rocky	13	*
ASD	Ash disposal area	373	0.1
BeF	Bethesda-Mines pit complex, 10 to 80 percent slopes	35	*
Bg	Bloomingdale silty clay loam, occasionally flooded	153	*
BrE	Bradyville-Rock outcrop complex, 5 to 25 percent slopes	2	*
CaB	Capshaw silt loam, 2 to 5 percent slopes	2,750	1.1
CbD	Colbert-Lyerly-Rock outcrop complex, 5 to 20 percent slopes	7,059	2.8
CoC	Collegedale silt loam, 5 to 12 percent slopes	2,783	1.1
CoD	Collegedale silt loam, 12 to 20 percent slopes	987	0.4
DeB	Dewey silt loam, 2 to 5 percent slopes	393	0.2
DeC	Dewey silt loam, 5 to 12 percent slopes	5,674	2.2
DeD	Dewey silt loam, 12 to 20 percent slopes	3,489	1.4
DeE	Dewey silt loam, 20 to 45 percent slopes	5,392	2.1
EcB	Ealy-Craigsville complex, rarely flooded	47	*
EtB	Etowah loam, 2 to 5 percent slopes	1,935	0.8
EtC	Etowah silt loam, 5 to 12 percent slopes	2,094	0.8
FuB	Fullerton-Pailo complex, 2 to 5 percent slopes	141	*
FuC	Fullerton-Pailo complex, 5 to 12 percent slopes	13,017	5.2
FuD	Fullerton-Pailo complex, 12 to 20 percent slopes	19,419	7.7
FuE	Fullerton-Pailo complex, 20 to 35 percent slopes	31,167	12.3
FwD	Fullerton-Dewey-Urban land complex, 5 to 20 percent slopes	1,261	0.5
FwE	Fullerton-Dewey-Urban land complex, 20 to 35 percent slopes	164	*
GnD	Gilpin silt loam, 12 to 20 percent slopes	6	*
GpE	Gilpin-Petros complex, 20 to 35 percent slopes	3,023	1.2
GpF	Gilpin-Petros complex, 35 to 80 percent slopes	3,248	1.3
GsF	Gilpin-Bouldin-Petros complex, 25 to 80 percent slopes, very stony	7,272	2.9
Ha	Hamblen silt loam, occasionally flooded	1,949	0.8
HeB	Hendon silt loam, 2 to 5 percent slopes	75	*
HeC	Hendon silt loam, 5 to 12 percent slopes	264	0.1
JeC	Jefferson loam, 5 to 12 percent slopes	698	0.3
JeE	Jefferson loam, 12 to 35 percent slopes	288	0.1
JnD	Jefferson cobbly loam, 12 to 20 percent slopes	21	*
JnF	Jefferson cobbly loam, 20 to 50 percent slopes	64	*
LbB	Lily loam, 2 to 5 percent slopes	600	0.2
LbC	Lily loam, 5 to 12 percent slopes	1,160	0.5
LbD	Lily loam, 12 to 20 percent slopes	520	0.2
LgD	Lily-Gilpin complex, 12 to 20 percent slopes	545	0.2
LgE	Lily-Gilpin complex, 20 to 35 percent slopes	113	*
LmD	Lily-Ramsey complex, 12 to 20 percent slopes	748	0.3
LmE	Lily-Ramsey complex, 20 to 35 percent slopes	1,209	0.5
LoB	Lonewood silt loam, 2 to 5 percent slopes	104	*
LoC	Lonewood silt loam, 5 to 12 percent slopes	114	*
LP	Limestone quarry	116	*
Me	Melvin silt loam, frequently flooded	725	0.3
MnC	Minvale gravelly silt loam, 5 to 12 percent slopes	1,700	0.7
MoC	Montevallo channery silt loam, 5 to 12 percent slopes	5,543	2.2
MoD	Montevallo channery silt loam, 12 to 20 percent slopes	8,631	3.4
MoE	Montevallo channery silt loam, 20 to 35 percent slopes	25,878	10.2
Pp	Pope-Philo complex, frequently flooded	234	*
RaD	Ramsey-Rock outcrop complex, 12 to 20 percent slopes	22	*
RaF	Ramsey-Rock outcrop complex, 20 to 50 percent slopes	288	0.1
Sd	Shady loam, occasionally flooded	3,207	1.3
SfB	Shady-Swafford-Urban land complex, 2 to 5 percent slopes	951	0.4

See footnote at end of table.

Table 4.—Acreage and Proportionate Extent of the Soils—Continued

Map symbol	Soil name	Acres	Percent
ShD	Shelocta silt loam, 12 to 20 percent slopes	24	*
SwB	Swafford loam, 2 to 5 percent slopes	697	0.3
TaB	Tasso loam, 2 to 5 percent slopes	2	*
TaC	Tasso loam, 5 to 12 percent slopes	5	*
TeB2	Townley-Coile complex, 2 to 5 percent slopes, eroded	2	*
TeC	Townley silt loam, 5 to 12 percent slopes	2,295	0.9
TeD	Townley silt loam, 12 to 20 percent slopes	5,977	2.4
TeE	Townley silt loam, 20 to 35 percent slopes	1,062	0.4
TuD	Townley-Armuchee-Urban land complex, 5 to 20 percent slopes	395	0.2
TuE	Townley-Armuchee-Urban land complex, 20 to 35 percent slopes	133	*
UrD	Urban land, 5 to 20 percent slopes	252	*
W	Water	24,500	9.7
WaB	Waynesboro loam, 2 to 5 percent slopes	1,261	0.5
WaC	Waynesboro loam, 5 to 12 percent slopes	4,620	1.8
WaD	Waynesboro loam, 12 to 20 percent slopes	2,797	1.1
WeD	Waynesboro-Etowah-Urban land complex, 5 to 20 percent slopes	669	0.3
WhB	Whitwell loam, 1 to 4 percent slopes, occasionally flooded	5,892	2.3
	Total	252,700	100.0

* Less than 0.1 percent.

Table 5.—Land Capability Class and Yields per Acre by Map Unit Component

(Yields are those that can be expected under a high level of management. They are for nonirrigated areas. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil)

Map symbol and soil name	Land capability	Corn	Grass-legume hay	Grass-legume pasture	Soybeans	Tobacco
		Bu	Tons	AUM	Bu	Lbs
AeC:						
Allen-------------------	3e	80.00	3.50	6.00	32.00	2,300.00
AeD:						
Allen-------------------	4e	75.00	3.20	5.50	25.00	2,000.00
AfD.						
Allen-Jefferson-Urban land						
AmC:						
Armuchee----------------	4e	---	2.10	3.80	---	---
AmD:						
Armuchee----------------	6e	---	1.50	2.70	---	---
AmE:						
Armuchee----------------	7e	---	---	---	---	---
ANS.						
Area not surveyed						
ApC:						
Apison------------------	6e	80.00	2.50	4.50	---	---
Sunlight----------------	6e	---	2.00	3.60	---	---
ApF:						
Apison------------------	7e	---	---	---	---	---
Sunlight----------------	7e	---	---	---	---	---
ASD.						
Ash disposal area						
BeF:						
Bethesda----------------	7e	---	---	---	---	---
Mines pit---------------	7e	---	---	---	---	---
Bg:						
Bloomingdale------------	4w	80.00	3.00	5.40	35.00	---
BrE:						
Bradyville--------------	6s	---	---	5.50	---	---
Rock outcrop.						
CaB:						
Capshaw-----------------	2w	75.00	2.50	6.00	32.00	1,900.00

Table 5.—Land Capability Class and Yields per Acre by Map Unit Component—Continued

Map symbol and soil name	Land capability	Corn	Grass-legume hay	Grass-legume pasture	Soybeans	Tobacco
		Bu	Tons	AUM	Bu	Lbs
CbD:						
Colbert------------------	7s	65.00	2.00	7.00	35.00	---
Lyerly-------------------	7s	55.00	4.00	7.00	30.00	---
Rock outcrop.						
CoC:						
Collegedale--------------	4e	70.00	3.60	5.50	25.00	2,000.00
CoD:						
Collegedale--------------	6e	---	2.80	5.00	---	---
DeB:						
Dewey--------------------	2e	105.00	3.50	8.80	35.00	2,300.00
DeC:						
Dewey--------------------	3e	90.00	2.40	7.00	30.00	---
DeD:						
Dewey--------------------	4e	70.00	4.00	6.00	35.00	1,800.00
DeE:						
Dewey--------------------	6e	---	2.50	4.50	---	---
EcB:						
Ealy---------------------	2w	90.00	4.50	7.00	---	---
Craigsville--------------	2w	70.00	1.80	4.50	---	---
EtB:						
Etowah-------------------	2e	110.00	3.50	8.80	35.00	2,500.00
EtC:						
Etowah-------------------	3e	95.00	3.20	8.10	32.00	2,350.00
FuB:						
Fullerton----------------	2e	80.00	3.00	7.60	30.00	1,900.00
Pailo--------------------	2e	72.00	1.80	4.50	26.00	---
FuC:						
Fullerton----------------	3e	65.00	2.60	5.50	26.00	1,850.00
Pailo--------------------	3e	60.00	1.80	4.50	20.00	---
FuD:						
Fullerton----------------	4e	---	1.50	5.50	---	---
Pailo--------------------	4e	---	1.50	3.80	---	---
FuE:						
Fullerton----------------	6e	---	---	3.50	---	---
Pailo--------------------	6e	---	---	3.00	---	---

Table 5.—Land Capability Class and Yields per Acre by Map Unit Component—Continued

Map symbol and soil name	Land capability	Corn	Grass-legume hay	Grass-legume pasture	Soybeans	Tobacco
		Bu	Tons	AUM	Bu	Lbs
FwD. Fullerton-Dewey-Urban land						
FwE: Fullerton-Dewey-Urban land						
GnD:						
Gilpin------------------	4e	85.00	2.50	5.50	25.00	2,000.00
GpE:						
Gilpin------------------	7s	---	---	2.00	---	---
Petros------------------	7s	---	---	1.50	---	---
GpF:						
Gilpin------------------	7s	---	---	---	---	---
Petros------------------	7s	---	---	---	---	---
GsF:						
Gilpin------------------	7s	---	---	---	---	---
Bouldin-----------------	7s	---	---	---	---	---
Petros------------------	7s	---	---	---	---	---
Ha:						
Hamblen-----------------	2w	100.00	3.00	7.50	38.00	2,400.00
HeB:						
Hendon------------------	2e	105.00	4.00	8.00	38.00	2,600.00
HeC:						
Hendon------------------	3e	95.00	3.50	7.50	35.00	2,500.00
JeC:						
Jefferson---------------	3e	85.00	3.50	6.00	25.00	2,200.00
JeE:						
Jefferson---------------	6e	---	---	1.80	---	---
JnD:						
Jefferson---------------	6s	---	---	3.00	---	---
JnF:						
Jefferson---------------	7s	---	---	---	---	---
LbB:						
Lily--------------------	2e	95.00	3.50	7.00	35.00	2,500.00
LbC:						
Lily--------------------	3e	95.00	6.00	3.00	35.00	2,500.00
LbD:						
Lily--------------------	4e	95.00	2.50	5.00	35.00	2,500.00

Table 5.—Land Capability Class and Yields per Acre by Map Unit Component—Continued

Map symbol and soil name	Land capability	Corn	Grass-legume hay	Grass-legume pasture	Soybeans	Tobacco
		Bu	Tons	AUM	Bu	Lbs
LgD:						
Lily	4e	---	2.50	5.00	---	---
Gilpin	4e	---	2.50	6.00	---	---
LgE:						
Lily	6e	---	---	2.00	---	---
Gilpin	6e	---	---	2.00	---	---
LmD:						
Lily	6e	60.00	2.50	4.50	25.00	1,500.00
Ramsey	6e	---	---	3.50	---	---
LmE:						
Lily	7e	---	---	2.00	---	---
Ramsey	7e	---	---	1.50	---	---
LoB:						
Lonewood	2e	110.00	4.00	7.20	35.00	2,600.00
LoC:						
Lonewood	3e	90.00	3.50	6.30	35.00	2,400.00
LP.						
Limestone quarry						
Me:						
Melvin	5w	---	2.50	4.50	---	---
MnC:						
Minvale	3e	90.00	2.80	7.00	30.00	1,700.00
MoC:						
Montevallo	4e	---	2.00	3.50	---	---
MoD:						
Montevallo	6e	---	---	3.00	---	---
MoE:						
Montevallo	7e	---	---	---	---	---
Pp:						
Pope	2w	130.00	4.00	8.50	45.00	2,200.00
Philo	2w	100.00	3.50	8.00	35.00	---
RaD:						
Ramsey	6s	---	---	3.50	---	---
Rock outcrop.						
RaF:						
Ramsey	7s	---	---	---	---	---
Rock outcrop.						

Table 5.—Land Capability Class and Yields per Acre by Map Unit Component—Continued

Map symbol and soil name	Land capability	Corn	Grass-legume hay	Grass-legume pasture	Soybeans	Tobacco
		Bu	Tons	AUM	Bu	Lbs
Sd:						
Shady-------------------	2e	120.00	5.00	8.00	40.00	2,700.00
SfB.						
Shady-Swafford-Urban land						
ShD:						
Shelocta----------------	4e	---	---	7.00	---	---
SwB:						
Swafford----------------	2w	110.00	3.50	8.00	40.00	2,100.00
TaB:						
Tasso-------------------	2e	95.00	3.00	7.60	32.00	1,800.00
TaC:						
Tasso-------------------	3e	95.00	2.00	6.50	30.00	1,500.00
TeB2:						
Townley-----------------	4e	60.00	2.40	6.00	24.00	---
Coile-------------------	4e	50.00	2.10	5.30	20.00	---
TeC:						
Townley-----------------	4e	---	2.10	5.50	---	---
TeD:						
Townley-----------------	6e	---	---	4.50	---	---
TeE:						
Townley-----------------	7e	---	---	3.00	---	---
TuD.						
Townley-Armuchee-Urban land						
TuE.						
Townley-Armuchee-Urban land						
UrD.						
Urban land						
W.						
Water						
WaB:						
Waynesboro--------------	2e	105.00	3.20	8.10	40.00	2,400.00
WaC:						
Waynesboro--------------	3e	95.00	3.00	7.50	35.00	2,300.00
WaD:						
Waynesboro--------------	4e	85.00	2.50	6.50	30.00	1,900.00

Table 5.—Land Capability Class and Yields per Acre by Map Unit Component—Continued

Map symbol and soil name	Land capability	Corn	Grass-legume hay	Grass-legume pasture	Soybeans	Tobacco
		Bu	Tons	AUM	Bu	Lbs
WeD:						
Waynesboro-Etowah-Urban land						
WhB:						
Whitwell----------------	2w	90.00	2.50	7.00	35.00	1,700.00

Table 6.—Acreage by Capability Class and Subclass

Capability class	Capability subclass	Acreage
Unclassified	---	51,290
2	e	12,019
2	w	10,970
3	e	28,017
4	e	40,368
4	w	145
5	w	689
6	e	50,808
6	s	42
7	e	26,986
7	s	18,194

Table 7.—Prime Farmland

(Only the soils considered prime farmland are listed. Urban or built-up areas of the soils listed are not considered prime farmland)

Map symbol	Map unit name
CaB	Capshaw silt loam, 2 to 5 percent slopes
DeB	Dewey silt loam, 2 to 5 percent slopes
EtB	Etowah loam, 2 to 5 percent slopes
FuB	Fullerton-Pailo complex, 2 to 5 percent slopes
Ha	Hamblen silt loam, occasionally flooded
HeB	Hendon silt loam, 2 to 5 percent slopes
LbB	Lily loam, 2 to 5 percent slopes
LoB	Lonewood silt loam, 2 to 5 percent slopes
Pp	Pope-Philo complex, frequently flooded
Sd	Shady loam, occasionally flooded
SwB	Swafford loam, 2 to 5 percent slopes
TaB	Tasso loam, 2 to 5 percent slopes
WaB	Waynesboro loam, 2 to 5 percent slopes
WhB	Whitwell loam, 1 to 4 percent slopes, occasionally flooded

Table 8.—Forest Productivity

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber (cu ft/ac)	Trees to manage
AeC:				
Allen	yellow-poplar	87	86	loblolly pine, shortleaf pine, yellow-poplar
	shortleaf pine	72	114	
	Virginia pine	70	114	
	southern red oak	70	57	
AeD:				
Allen	yellow-poplar	90	100	loblolly pine, yellow poplar, shortleaf pine
	Virginia pine	70	114	
	shortleaf pine	70	114	
	southern red oak	70	57	
AfD:				
Allen	yellow-poplar	90	100	loblolly pine, yellow poplar, shortleaf pine
	Virginia pine	70	114	
	shortleaf pine	70	114	
	southern red oak	70	57	
Jefferson	loblolly pine	80	114	eastern white pine, shortleaf pine, white oak, yellow-poplar
	northern red oak	80	57	
	shortleaf pine	70	114	
	Virginia pine	70	114	
	white oak	70	57	
	yellow-poplar	90	100	
Urban land.				
AmC:				
Armuchee	oak	60	43	eastern redcedar, loblolly pine, shortleaf pine, white oak
	shortleaf pine	60	86	
	Virginia pine	60	86	
AmD:				
Armuchee	oak	60	43	eastern redcedar, loblolly pine, shortleaf pine, white oak
	shortleaf pine	60	86	
	Virginia pine	60	86	
AmE:				
Armuchee	oak	60	43	eastern redcedar, loblolly pine, shortleaf pine, white oak
	shortleaf pine	60	86	
	Virginia pine	60	86	
ANS. Area not surveyed				
ApC:				
Apison	loblolly pine	83	114	loblolly pine, shortleaf pine
	northern red oak	70	57	
	shortleaf pine	63	100	
	Virginia pine	71	114	
Sunlight	loblolly pine	66	86	loblolly pine, shortleaf pine
	shortleaf pine	61	86	
	Virginia pine	61	86	

Table 8.—Forest Productivity—Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
ApF:				
Apison------------------	loblolly pine-------	83	114	loblolly pine,
	northern red oak----	70	57	shortleaf pine
	shortleaf pine------	63	100	
	Virginia pine-------	71	114	
Sunlight----------------	loblolly pine-------	66	86	loblolly pine,
	oak-----------------	61	86	shortleaf pine
	Virginia pine-------	61	86	
ASD.				
Ash disposal area				
BeF:				
Bethesda----------------	eastern redcedar----	45	52	eastern redcedar,
	Virginia pine-------	60	70	Virginia pine
Mines pit---------------	eastern redcedar----	45	52	---
	Virginia pine-------	60	70	
Bg:				
Bloomingdale------------	sweetgum------------	80	86	American sycamore,
	water oak-----------	80	72	sweetgum
BrE:				
Bradyville--------------	eastern redcedar----	40	---	loblolly pine,
	southern red oak----	70	---	shortleaf pine,
	white oak-----------	70	---	yellow-poplar
Rock outcrop.				
CaB:				
Capshaw-----------------	loblolly pine-------	80	114	loblolly pine,
	northern red oak----	70	57	shortleaf pine,
				yellow-poplar
CbD:				
Colbert-----------------	eastern redcedar----	45	57	American sycamore,
	loblolly pine-------	80	114	eastern
	shortleaf pine------	60	86	cottonwood,
	southern red oak----	70	57	eastern redcedar,
	sweetgum------------	80	86	loblolly pine,
	white oak-----------	70	57	loblolly pine,
				shortleaf pine,
				southern red oak
Lyerly------------------	eastern redcedar----	47	57	eastern redcedar,
	loblolly pine-------	65	86	loblolly pine
	shortleaf pine------	60	86	
Rock outcrop.				
CoC:				
Collegedale-------------	loblolly pine-------	80	114	loblolly pine,
	shortleaf pine------	70	114	shortleaf pine,
	southern red oak----	70	57	Virginia pine,
	Virginia pine-------	70	114	yellow-poplar
	white oak-----------	70	57	

Table 8.—Forest Productivity—Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
CoD:				
Collegedale	loblolly pine	80	114	loblolly pine, shortleaf pine, Virginia pine, yellow-poplar
	shortleaf pine	70	114	
	southern red oak	70	57	
	Virginia pine	70	114	
	white oak	70	57	
DeB:				
Dewey	loblolly pine	78	114	black walnut, eastern white pine, loblolly pine, shortleaf pine, yellow-poplar
	shortleaf pine	73	114	
	southern red oak	70	57	
	Virginia pine	70	114	
	white oak	70	57	
DeC:				
Dewey	loblolly pine	78	114	black walnut, eastern white pine, loblolly pine, yellow-poplar
	shortleaf pine	73	114	
	southern red oak	70	57	
	Virginia pine	70	114	
	white oak	70	57	
DeD:				
Dewey	loblolly pine	80	114	black walnut, loblolly pine, shortleaf pine, yellow-poplar
	southern red oak	70	57	
	white oak	70	57	
DeE:				
Dewey	loblolly pine	78	114	eastern redcedar, eastern white pine, loblolly pine
	northern red oak	70	57	
	shortleaf pine	73	114	
	southern red oak	70	57	
	Virginia pine	70	114	
	white oak	70	57	
EcB:				
Ealy	American sycamore	90	100	black walnut, eastern white pine, loblolly pine, yellow-poplar
	eastern white pine	90	172	
	northern red oak	80	57	
	shortleaf pine	80	129	
	Virginia pine	75	114	
	yellow-poplar	105	114	
Craigsville	eastern white pine	90	172	eastern white pine, loblolly pine, yellow-poplar
	northern red oak	80	57	
	Virginia pine	80	114	
	yellow-poplar	95	100	
EtB:				
Etowah	loblolly pine	90	129	loblolly pine, yellow-poplar
	shortleaf pine	80	129	
	southern red oak	80	57	
	yellow-poplar	90	86	

Table 8.—Forest Productivity—Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
EtC:				
Etowah	loblolly pine	90	129	black walnut, loblolly pine, white oak, yellow-poplar
	shortleaf pine	80	129	
	southern red oak	80	57	
	yellow-poplar	90	86	
FuB:				
Fullerton	hickory	90	100	eastern white pine, loblolly pine, southern red oak, yellow-poplar
	shortleaf pine	67	100	
	southern red oak	70	57	
Pailo	black oak	70	57	loblolly pine, shortleaf pine
	southern red oak	70	43	
	yellow-poplar	90	86	
FuC:				
Fullerton	hickory	90	100	eastern white pine, loblolly pine, southern red oak, yellow-poplar
	loblolly pine	80	114	
	shortleaf pine	67	100	
	southern red oak	70	57	
Pailo	black oak	70	57	loblolly pine, shortleaf pine
	southern red oak	70	43	
	yellow-poplar	90	86	
FuD:				
Fullerton	hickory	90	100	eastern white pine, loblolly pine, southern red oak, yellow-poplar
	shortleaf pine	67	100	
	southern red oak	70	57	
Pailo	chestnut oak	60	43	loblolly pine, shortleaf pine
	scarlet oak	60	43	
	southern red oak	70	43	
	Virginia pine	60	86	
FuE:				
Fullerton	hickory	90	100	eastern white pine, loblolly pine, southern red oak, yellow-poplar
	shortleaf pine	67	100	
	southern red oak	70	57	
Pailo	chestnut oak	60	43	loblolly pine, shortleaf pine
	scarlet oak	60	43	
	southern red oak	70	43	
	Virginia pine	60	86	
FwD:				
Fullerton	hickory	90	100	loblolly pine, northern red oak, yellow-poplar
	shortleaf pine	67	100	
	southern red oak	70	57	
Dewey	loblolly pine	80	114	black walnut, loblolly pine, shortleaf pine, yellow-poplar
	southern red oak	70	57	
	white oak	70	57	
	yellow-poplar	90	86	
Urban land.				

Table 8.—Forest Productivity—Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
FwE:				
Fullerton	hickory	90	114	loblolly pine, northern red oak, yellow-poplar
	shortleaf pine	67	100	
	southern red oak	70	57	
Dewey	loblolly pine	78	114	eastern redcedar, eastern white pine, loblolly pine
	northern red oak	70	57	
	shortleaf pine	73	114	
	southern red oak	70	57	
	Virginia pine	70	114	
	white oak	70	57	
	yellow-poplar	90	86	
Urban land.				
GnD:				
Gilpin	northern red oak	80	57	northern red oak, yellow-poplar
	yellow-poplar	90	100	
GpE:				
Gilpin	hickory	90	100	black oak, northern red oak, white oak, yellow-poplar
	northern red oak	80	57	
Petros	black oak	60	43	black oak, chestnut oak, shortleaf pine, Virginia pine
	chestnut oak	55	38	
	Virginia pine	60	86	
GpF:				
Gilpin	hickory	90	100	northern red oak, yellow-poplar
	northern red oak	80	71	
Petros	black oak	60	43	black oak, chestnut oak, shortleaf pine, Virginia pine
	chestnut oak	55	38	
	Virginia pine	60	86	
GsF:				
Gilpin	black oak	60	43	black oak, northern red oak, white oak, yellow-poplar
	northern red oak	80	57	
	white oak	75	57	
	yellow-poplar	90	100	
Bouldin	northern red oak	75	57	northern red oak, shortleaf pine, Virginia pine, white oak, yellow-poplar
	shortleaf pine	55	90	
	Virginia pine	60	81	
	white oak	50	38	
	yellow-poplar	90	86	
Petros	black oak	60	43	black oak, chestnut oak, shortleaf pine, southern red oak, Virginia pine
	chestnut oak	55	38	
	shortleaf pine	55	90	
	southern red oak	60	43	
	Virginia pine	60	86	

Table 8.—Forest Productivity—Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
Ha:				
Hamblen----------------	American sycamore---	86	93	American sycamore, eastern cottonwood, loblolly pine, yellow-poplar
	eastern cottonwood--	80	85	
	loblolly pine-------	90	129	
	northern red oak----	80	57	
	yellow-poplar-------	100	114	
HeB:				
Hendon-----------------	loblolly pine-------	80	114	eastern white pine, loblolly pine, shortleaf pine, Virginia pine
	shortleaf pine------	70	114	
	southern red oak----	70	57	
	Virginia pine-------	70	114	
	white oak-----------	70	57	
HeC:				
Hendon-----------------	loblolly pine-------	80	114	eastern white pine, loblolly pine, shortleaf pine, Virginia pine
	shortleaf pine------	70	114	
	southern red oak----	70	57	
	Virginia pine-------	70	114	
	white oak-----------	70	57	
JeC:				
Jefferson--------------	loblolly pine-------	80	114	black walnut, eastern white pine, shortleaf pine, white oak, yellow-poplar
	northern red oak----	88	57	
	shortleaf pine------	65	100	
	Virginia pine-------	70	114	
	white oak-----------	70	43	
	yellow-poplar-------	98	100	
JeE:				
Jefferson--------------	loblolly pine-------	80	114	eastern white pine, shortleaf pine, white oak, yellow-poplar
	northern red oak----	85	57	
	Virginia pine-------	70	114	
	white oak-----------	65	43	
	yellow-poplar-------	108	114	
JnD:				
Jefferson--------------	loblolly pine-------	80	114	eastern white pine, shortleaf pine, white oak, yellow-poplar
	northern red oak----	80	57	
	shortleaf pine------	70	114	
	Virginia pine-------	70	114	
	white oak-----------	70	57	
	yellow-poplar-------	90	100	
JnF:				
Jefferson--------------	loblolly pine-------	80	114	eastern white pine, shortleaf pine, white oak, yellow-poplar
	northern red oak----	80	57	
	shortleaf pine------	65	114	
	Virginia pine-------	70	114	
	white oak-----------	70	57	
	yellow-poplar-------	85	100	
LbB:				
Lily-------------------	scarlet oak---------	77	43	scarlet oak, shortleaf pine, Virginia pine, white oak
	shortleaf pine------	63	100	
	Virginia pine-------	80	114	
	white oak-----------	73	57	

Table 8.—Forest Productivity—Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
LbC:				
Lily	scarlet oak	77	43	scarlet oak,
	shortleaf pine	63	100	shortleaf pine,
	Virginia pine	80	114	Virginia pine,
	white oak	73	57	white oak
LbD:				
Lily	scarlet oak	77	43	scarlet oak,
	shortleaf pine	63	100	shortleaf pine,
	Virginia pine	80	114	Virginia pine,
	white oak	73	57	white oak
LgD:				
Lily	scarlet oak	77	43	scarlet oak,
	shortleaf pine	63	100	shortleaf pine,
	Virginia pine	80	114	Virginia pine,
	white oak	73	57	white oak
Gilpin	northern red oak	80	57	northern red oak,
	yellow-poplar	90	100	yellow-poplar
LgE:				
Lily	scarlet oak	77	43	scarlet oak,
	shortleaf pine	63	100	shortleaf pine,
	Virginia pine	80	114	Virginia pine,
	white oak	73	57	white oak
Gilpin	northern red oak	80	57	northern red oak,
	yellow-poplar	90	100	yellow-poplar
LmD:				
Lily	scarlet oak	77	43	scarlet oak,
	shortleaf pine	63	100	shortleaf pine,
	Virginia pine	80	114	Virginia pine,
	white oak	73	57	white oak
Ramsey	northern red oak	50	29	northern red oak,
	shortleaf pine	50	72	shortleaf pine,
	Virginia pine	50	77	Virginia pine
LmE:				
Lily	scarlet oak	77	43	scarlet oak,
	shortleaf pine	63	100	shortleaf pine,
	Virginia pine	80	114	Virginia pine,
	white oak	73	57	white oak
Ramsey	northern red oak	50	29	northern red oak,
	shortleaf pine	50	72	shortleaf pine,
	Virginia pine	50	77	Virginia pine
LoB:				
Lonewood	northern red oak	70	62	northern red oak,
	shortleaf pine	70	114	shortleaf pine,
	Virginia pine	70	114	Virginia pine,
	white oak	70	57	white oak, yellow-poplar

Table 8.—Forest Productivity—Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
LoC:				
Lonewood	northern red oak	70	62	northern red oak, shortleaf pine, Virginia pine, white oak, yellow-poplar
	shortleaf pine	70	114	
	Virginia pine	70	114	
	white oak	70	57	
LP. Limestone quarry				
Me:				
Melvin	cherrybark oak	91	114	American sycamore, baldcypress, eastern cottonwood, green ash, pin oak, sweetgum, willow oak
	eastern cottonwood	101	129	
	pin oak	99	100	
	sweetgum	89	100	
MnC:				
Minvale	loblolly pine	80	114	black walnut, loblolly pine, yellow-poplar
	shortleaf pine	70	114	
	Virginia pine	70	114	
	white oak	70	57	
	yellow-poplar	90	86	
MoC:				
Montevallo	loblolly pine	66	86	eastern white pine, loblolly pine, shortleaf pine, Virginia pine
	shortleaf pine	61	86	
	Virginia pine	61	86	
MoD:				
Montevallo	loblolly pine	66	86	eastern white pine, loblolly pine, shortleaf pine, Virginia pine
	shortleaf pine	61	86	
	Virginia pine	61	86	
MoE:				
Montevallo	loblolly pine	66	86	eastern white pine, hickory, loblolly pine, oak, shortleaf pine, Virginia pine
	oak	61	86	
	Virginia pine	61	86	
Pp:				
Pope	American sycamore	75	81	American sycamore, northern red oak, sweetgum, white oak, yellow-poplar
	northern red oak	80	62	
	sweetgum	75	86	
	white oak	80	57	
	yellow-poplar	96	100	
Philo	American sycamore	75	81	American sycamore, northern red oak, sweetgum, white oak, yellow-poplar
	northern red oak	80	62	
	sweetgum	75	86	
	white oak	80	57	
	yellow-poplar	96	100	

Table 8.—Forest Productivity—Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
RaD:				
Ramsey------------------	northern red oak----	50	29	northern red oak,
	shortleaf pine------	50	72	shortleaf pine,
	Virginia pine-------	50	77	Virginia pine
Rock outcrop.				
RaF:				
Ramsey------------------	northern red oak----	50	29	northern red oak,
	shortleaf pine------	50	72	shortleaf pine,
	Virginia pine-------	50	77	Virginia pine
Rock outcrop.				
Sd:				
Shady-------------------	southern red oak----	80	57	black walnut,
	white oak-----------	80	57	yellow-poplar
	yellow-poplar-------	100	114	
SfB:				
Shady-------------------	southern red oak----	80	57	black walnut,
	white oak-----------	80	57	yellow-poplar
	yellow-poplar-------	100	114	
Swafford----------------	northern red oak----	75	57	loblolly pine,
	sweetgum------------	90	100	sweetgum, yellow-
	yellow-poplar-------	95	100	poplar
Urban land.				
ShD:				
Shelocta----------------	black oak-----------	80	107	black oak, scarlet
	scarlet oak---------	80	43	oak, white oak,
	white oak-----------	70	57	yellow-poplar
	yellow-poplar-------	100	57	
SwB:				
Swafford----------------	northern red oak----	75	57	loblolly pine,
	sweetgum------------	90	100	sweetgum, yellow-
	yellow-poplar-------	95	100	poplar
TaB:				
Tasso-------------------	shortleaf pine------	70	114	loblolly pine,
	southern red oak----	70	57	shortleaf pine,
	Virginia pine-------	70	114	Virginia pine
	white oak-----------	70	57	
	yellow-poplar-------	90	86	
TaC:				
Tasso-------------------	shortleaf pine------	70	114	loblolly pine,
	southern red oak----	70	57	shortleaf pine,
	Virginia pine-------	70	114	Virginia pine
	white oak-----------	70	57	
	yellow-poplar-------	90	86	

Table 8.—Forest Productivity—Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
TeB2:				
Townley	loblolly pine	83	114	loblolly pine, Virginia pine
	northern red oak	70	57	
	shortleaf pine	63	100	
	Virginia pine	71	114	
Coile	loblolly pine	83	114	loblolly pine, shortleaf pine, Virginia pine
	northern red oak	70	57	
	shortleaf pine	63	100	
	Virginia pine	71	114	
TeC:				
Townley	loblolly pine	70	86	loblolly pine, Virginia pine
	shortleaf pine	60	86	
	Virginia pine	70	114	
TeD:				
Townley	loblolly pine	83	114	loblolly pine, Virginia pine
	northern red oak	70	57	
	shortleaf pine	63	100	
	Virginia pine	71	114	
TeE:				
Townley	loblolly pine	83	114	loblolly pine, Virginia pine
	northern red oak	70	57	
	shortleaf pine	63	100	
	Virginia pine	71	114	
TuD:				
Townley	loblolly pine	83	114	loblolly pine, Virginia pine
	northern red oak	70	57	
	shortleaf pine	63	100	
	Virginia pine	71	114	
Armuchee	shortleaf pine	60	86	---
	Virginia pine	60	86	
	white oak	60	43	
Urban land.				
TuE:				
Townley	loblolly pine	70	86	loblolly pine, Virginia pine
	shortleaf pine	60	86	
	Virginia pine	70	114	
Armuchee	shortleaf pine	60	86	eastern redcedar, loblolly pine, shortleaf pine, white oak
	Virginia pine	60	86	
	white oak	60	43	
Urban land.				
UrD. Urban land				
W. Water				

Table 8.—Forest Productivity—Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
WaB:				
Waynesboro	loblolly pine	80	114	black walnut, loblolly pine, shortleaf pine, yellow-poplar
	southern red oak	70	57	
	white oak	70	57	
	yellow-poplar	90	86	
WaC:				
Waynesboro	loblolly pine	80	114	black walnut, loblolly pine, shortleaf pine, yellow-poplar
	southern red oak	70	57	
	white oak	70	57	
	yellow-poplar	90	86	
WaD:				
Waynesboro	loblolly pine	80	114	black walnut, loblolly pine, shortleaf pine, yellow-poplar
	southern red oak	70	57	
	white oak	70	57	
	yellow-poplar	90	86	
WeD:				
Waynesboro	loblolly pine	80	114	black walnut, loblolly pine, shortleaf pine, yellow-poplar
	southern red oak	70	57	
	white oak	70	57	
	yellow-poplar	90	86	
Etowah	loblolly pine	90	129	loblolly pine, yellow-poplar
	shortleaf pine	80	129	
	southern red oak	80	57	
	yellow-poplar	90	86	
Urban land.				
WhB:				
Whitwell	eastern white pine	90	172	eastern white pine, loblolly pine, sweetgum
	loblolly pine	90	129	
	northern red oak	75	57	
	sweetgum	90	100	
	yellow-poplar	95	100	

Table 9.—Forest Management, Part I

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
AeC:							
Allen---------------	95	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
				Slope	0.50		
AeD:							
Allen---------------	95	Moderate		Poorly suited		Severe	
		Landslides	0.50	Slope	1.00	Low strength	1.00
		Slope	0.50	Low strength	0.50		
				Landslides	0.50		
AfD:							
Allen---------------	40	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
Jefferson-----------	30	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
Urban land----------	25	Not rated		Not rated		Not rated	
AmC:							
Armuchee------------	94	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
				Slope	0.50		
AmD:							
Armuchee------------	92	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
AmE:							
Armuchee------------	97	Severe		Poorly suited		Severe	
		Landslides	1.00	Slope	1.00	Low strength	1.00
		Slope	0.50	Landslides	1.00		
				Low strength	0.50		
ANS:							
Area not surveyed---	100	Not rated		Not rated		Not rated	
ApC:							
Apison--------------	73	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
				Slope	0.50		
Sunlight------------	27	Slight		Moderately suited		Slight	
				Slope	0.50	Strength	0.10

Table 9.—Forest Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings: Rating class and limiting features	Value	Suitability for log landings: Rating class and limiting features	Value	Soil rutting hazard: Rating class and limiting features	Value
ApF:							
Apison	45	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
Sunlight	40	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
ASD:							
Ash disposal area	100	Not rated		Not rated		Not rated	
BeF:							
Bethesda	80	Severe		Poorly suited		Severe	
		Landslides	1.00	Landslides	1.00	Low strength	1.00
		Slope	1.00	Slope	1.00		
		Low strength	0.50	Low strength	0.50		
Mines pit	20	Not rated		Not rated		Not rated	
Bg:							
Bloomingdale	95	Severe		Poorly suited		Severe	
		Flooding	1.00	Flooding	1.00	Low strength	1.00
		Low strength	0.50	Wetness	1.00		
				Low strength	0.50		
BrE:							
Bradyville	61	Moderate		Poorly suited		Moderate	
		Slope	0.50	Slope	1.00	Low strength	0.50
		Restrictive layer	0.50				
Rock outcrop	39	Not rated		Not rated		Not rated	
CaB:							
Capshaw	88	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
CbD:							
Colbert	36	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Restrictive layer	0.50	Low strength	0.50		
Lyerly	34	Moderate		Poorly suited		Severe	
		Restrictive layer	0.50	Slope	1.00	Low strength	1.00
		Slope	0.50	Low strength	0.50		
Rock outcrop	23	Not rated		Not rated		Not rated	
CoC:							
Collegedale	97	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
				Slope	0.50		
CoD:							
Collegedale	85	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		

Table 9.—Forest Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings: Rating class and limiting features	Value	Suitability for log landings: Rating class and limiting features	Value	Soil rutting hazard: Rating class and limiting features	Value
DeB:							
Dewey---------------	90	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
DeC:							
Dewey---------------	93	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
				Slope	0.50		
DeD:							
Dewey---------------	93	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
Minvale-------------	7	Not rated		Not rated		Not rated	
DeE:							
Dewey---------------	90	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
EcB:							
Ealy----------------	60	Moderate		Moderately suited		Severe	
		Flooding	0.50	Flooding	0.50	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
Craigsville---------	40	Slight		Moderately suited		Moderate	
				Low strength	0.50	Low strength	0.50
EtB:							
Etowah--------------	92	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
EtC:							
Etowah--------------	93	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
				Slope	0.50		
FuB:							
Fullerton-----------	69	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
Pailo---------------	25	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
FuC:							
Fullerton-----------	68	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
				Slope	0.50		
Pailo---------------	20	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
				Slope	0.50		

Table 9.—Forest Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings: Rating class and limiting features	Value	Suitability for log landings: Rating class and limiting features	Value	Soil rutting hazard: Rating class and limiting features	Value
FuD:							
Fullerton-----------	67	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
Pailo---------------	26	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
FuE:							
Fullerton-----------	67	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
Pailo---------------	30	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
FwD:							
Fullerton-----------	45	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
Dewey---------------	35	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
Urban land----------	20	Not rated		Not rated		Not rated	
FwE:							
Fullerton-----------	45	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
Dewey---------------	35	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
Urban land----------	20	Not rated		Not rated		Not rated	
GnD:							
Gilpin--------------	94	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
GpE:							
Gilpin--------------	57	Severe		Poorly suited		Severe	
		Landslides	1.00	Slope	1.00	Low strength	1.00
		Slope	0.50	Landslides	1.00		
				Low strength	0.50		
Petros--------------	39	Severe		Poorly suited		Severe	
		Landslides	1.00	Slope	1.00	Low strength	1.00
		Slope	0.50	Landslides	1.00		

Table 9.—Forest Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings: Rating class and limiting features	Value	Suitability for log landings: Rating class and limiting features	Value	Soil rutting hazard: Rating class and limiting features	Value
GpF:							
Gilpin	63	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Landslides	1.00	Landslides	1.00		
		Low strength	0.50	Low strength	0.50		
Petros	30	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Landslides	1.00	Landslides	1.00		
GsF:							
Gilpin	37	Severe		Poorly suited		Severe	
		Landslides	1.00	Slope	1.00	Low strength	1.00
		Slope	1.00	Landslides	1.00		
		Low strength	0.50	Low strength	0.50		
Bouldin	36	Severe		Poorly suited		Slight	
		Landslides	1.00	Slope	1.00	Strength	0.10
		Slope	1.00	Landslides	1.00		
		Stoniness	0.50	Rock fragments	1.00		
Petros	23	Severe		Poorly suited		Severe	
		Landslides	1.00	Slope	1.00	Low strength	1.00
		Slope	1.00	Landslides	1.00		
Ha:							
Hamblen	90	Moderate		Moderately suited		Severe	
		Flooding	0.50	Flooding	0.50	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
HeB:							
Hendon	96	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
HeC:							
Hendon	97	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
				Slope	0.50		
JeC:							
Jefferson	95	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
				Slope	0.50		
JeE:							
Jefferson	83	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
JnD:							
Jefferson	95	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
JnF:							
Jefferson	95	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		

Table 9.—Forest Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings: Rating class and limiting features	Value	Suitability for log landings: Rating class and limiting features	Value	Soil rutting hazard: Rating class and limiting features	Value
LbB:							
Lily----------------	86	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
		Restrictive layer	0.50				
LbC:							
Lily----------------	97	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
		Restrictive layer	0.50	Slope	0.50		
LbD:							
Lily----------------	88	Moderate		Poorly suited		Severe	
		Restrictive layer	0.50	Slope	1.00	Low strength	1.00
		Slope	0.50	Low strength	0.50		
LgD:							
Lily----------------	56	Moderate		Poorly suited		Severe	
		Restrictive layer	0.50	Slope	1.00	Low strength	1.00
		Slope	0.50	Low strength	0.50		
Gilpin--------------	36	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
LgE:							
Lily----------------	52	Severe		Poorly suited		Severe	
		Landslides	1.00	Slope	1.00	Low strength	1.00
		Slope	0.50	Landslides	1.00		
		Restrictive layer	0.50	Low strength	0.50		
Gilpin--------------	36	Severe		Poorly suited		Severe	
		Landslides	1.00	Slope	1.00	Low strength	1.00
		Slope	0.50	Landslides	1.00		
				Low strength	0.50		
LmD:							
Lily----------------	57	Moderate		Poorly suited		Severe	
		Restrictive layer	0.50	Slope	1.00	Low strength	1.00
		Slope	0.50	Low strength	0.50		
Ramsey--------------	38	Severe		Poorly suited		Severe	
		Restrictive layer	1.00	Slope	1.00	Low strength	1.00
		Slope	0.50	Low strength	0.50		
LmE:							
Lily----------------	52	Severe		Poorly suited		Severe	
		Landslides	1.00	Slope	1.00	Low strength	1.00
		Slope	0.50	Landslides	1.00		
		Restrictive layer	0.50	Low strength	0.50		
Ramsey--------------	42	Severe		Poorly suited		Severe	
		Landslides	1.00	Slope	1.00	Low strength	1.00
		Restrictive layer	1.00	Landslides	1.00		
		Slope	0.50	Low strength	0.50		

Table 9.—Forest Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings: Rating class and limiting features	Value	Suitability for log landings: Rating class and limiting features	Value	Soil rutting hazard: Rating class and limiting features	Value
LoB:							
Lonewood------------	90	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
LoC:							
Lonewood------------	90	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
				Slope	0.50		
LP:							
Limestone quarry----	100	Not rated		Not rated		Not rated	
Me:							
Melvin--------------	95	Severe		Poorly suited		Severe	
		Flooding	1.00	Flooding	1.00	Low strength	1.00
		Low strength	0.50	Wetness	1.00		
				Low strength	0.50		
MnC:							
Minvale-------------	95	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
				Slope	0.50		
MoC:							
Montevallo----------	95	Slight		Moderately suited		Severe	
				Slope	0.50	Low strength	1.00
MoD:							
Montevallo----------	93	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
MoE:							
Montevallo----------	93	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
Pp:							
Pope----------------	50	Severe		Poorly suited		Severe	
		Flooding	1.00	Flooding	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
Philo---------------	45	Severe		Poorly suited		Severe	
		Flooding	1.00	Flooding	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
RaD:							
Ramsey--------------	75	Severe		Poorly suited		Severe	
		Restrictive layer	1.00	Slope	1.00	Low strength	1.00
		Slope	0.50	Low strength	0.50		
Rock outcrop--------	20	Not rated		Not rated		Not rated	

Table 9.—Forest Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
RaF:							
Ramsey	70	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
				Low strength	0.50		
Rock outcrop	30	Not rated		Not rated		Not rated	
Sd:							
Shady	96	Moderate		Moderately suited		Severe	
		Flooding	0.50	Flooding	0.50	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
SfB:							
Shady	40	Moderate		Moderately suited		Severe	
		Flooding	0.50	Flooding	0.50	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
Swafford	35	Slight		Moderately suited		Severe	
				Low strength	0.50	Low strength	1.00
Urban land	25	Not rated		Not rated		Not rated	
ShD:							
Shelocta	97	Severe		Poorly suited		Severe	
		Landslides	1.00	Landslides	1.00	Low strength	1.00
		Slope	0.50	Slope	1.00		
				Low strength	0.50		
SwB:							
Swafford	94	Slight		Moderately suited		Severe	
				Low strength	0.50	Low strength	1.00
TaB:							
Tasso	92	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
TaC:							
Tasso	92	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
				Slope	0.50		
TeB2:							
Townley	75	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
Coile	25	Slight		Moderately suited		Severe	
				Low strength	0.50	Low strength	1.00
TeC:							
Townley	96	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
				Slope	0.50		
TeD:							
Townley	90	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		

Table 9.—Forest Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings: Rating class and limiting features	Value	Suitability for log landings: Rating class and limiting features	Value	Soil rutting hazard: Rating class and limiting features	Value
TeE:							
Townley-------------	92	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
TuD:							
Townley-------------	45	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
Armuchee------------	35	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
Urban land----------	20	Not rated		Not rated		Not rated	
TuE:							
Townley-------------	45	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
Armuchee------------	35	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
Urban land----------	20	Not rated		Not rated		Not rated	
UrD:							
Urban land----------	100	Not rated		Not rated		Not rated	
W:							
Water---------------	100	Not rated		Not rated		Not rated	
WaB:							
Waynesboro----------	93	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
WaC:							
Waynesboro----------	93	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
				Slope	0.50		
WaD:							
Waynesboro----------	97	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
WeD:							
Waynesboro----------	45	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
Etowah--------------	35	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
Urban land----------	20	Not rated		Not rated		Not rated	

Table 9.—Forest Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
WhB:							
Whitwell------------	94	Moderate		Moderately suited		Severe	
		Flooding	0.50	Flooding	0.50	Low strength	1.00
		Low strength	0.50	Low strength	0.50		

Table 9.—Forest Management, Part II

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitability for roads (natural surface): Rating class and limiting features	Value
AeC:							
Allen	95	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Low strength	0.50
						Slope	0.50
AeD:							
Allen	95	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
AfD:							
Allen	40	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
Jefferson	30	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
Urban land	25	Not rated		Not rated		Not rated	
AmC:							
Armuchee	94	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Low strength	0.50
						Slope	0.50
AmD:							
Armuchee	92	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
AmE:							
Armuchee	97	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Landslides	1.00
						Low strength	0.50
ANS:							
Area not surveyed	100	Not rated		Not rated		Not rated	
ApC:							
Apison	73	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Low strength	0.50
						Slope	0.50
Sunlight	27	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
ApF:							
Apison	45	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50

Table 9.—Forest Management, Part II—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitability for roads (natural surface): Rating class and limiting features	Value
ApF:							
Sunlight	40	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
ASD:							
Ash disposal area	100	Not rated		Not rated		Not rated	
BeF:							
Bethesda	80	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Landslides	1.00
						Slope	1.00
						Low strength	0.50
Mines pit	20	Not rated		Not rated		Not rated	
Bg:							
Bloomingdale	95	Slight		Slight		Poorly suited	
						Flooding	1.00
						Wetness	1.00
						Low strength	0.50
BrE:							
Bradyville	61	Moderate		Moderate		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.50	Slope	1.00
Rock outcrop	39	Not rated		Not rated		Not rated	
CaB:							
Capshaw	88	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
CbD:							
Colbert	36	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
Lyerly	34	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
Rock outcrop	23	Not rated		Not rated		Not rated	
CoC:							
Collegedale	97	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Low strength	0.50
						Slope	0.50
CoD:							
Collegedale	85	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
DeB:							
Dewey	90	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
DeC:							
Dewey	93	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Low strength	0.50
						Slope	0.50

Table 9.—Forest Management, Part II—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitability for roads (natural surface): Rating class and limiting features	Value
DeD:							
Dewey	93	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
DeE:							
Dewey	90	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
EcB:							
Ealy	60	Slight		Slight		Moderately suited	
						Flooding	0.50
						Low strength	0.50
Craigsville	40	Slight		Slight		Moderately suited	
						Low strength	0.50
EtB:							
Etowah	92	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
EtC:							
Etowah	93	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Low strength	0.50
						Slope	0.50
FuB:							
Fullerton	69	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
Pailo	25	Slight		Slight		Moderately suited	
						Low strength	0.50
FuC:							
Fullerton	68	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Low strength	0.50
						Slope	0.50
Pailo	20	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
						Slope	0.50
FuD:							
Fullerton	67	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
Pailo	26	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
FuE:							
Fullerton	67	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
Pailo	30	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50

Table 9.—Forest Management, Part II—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitability for roads (natural surface): Rating class and limiting features	Value
FwD:							
Fullerton	45	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
Dewey	35	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
Urban land	20	Not rated		Not rated		Not rated	
FwE:							
Fullerton	45	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
Dewey	35	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
Urban land	20	Not rated		Not rated		Not rated	
GnD:							
Gilpin	94	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
GpE:							
Gilpin	57	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Landslides	1.00
						Low strength	0.50
Petros	39	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Landslides	1.00
GpF:							
Gilpin	63	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Landslides	1.00
						Low strength	0.50
Petros	30	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Landslides	1.00
GsF:							
Gilpin	37	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Landslides	1.00
						Low strength	0.50
Bouldin	36	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Landslides	1.00
						Rock fragments	1.00
Petros	23	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Landslides	1.00

Table 9.—Forest Management, Part II—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitability for roads (natural surface): Rating class and limiting features	Value
Ha:							
Hamblen	90	Slight		Slight		Moderately suited	
						Flooding	0.50
						Low strength	0.50
HeB:							
Hendon	96	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
HeC:							
Hendon	97	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
						Slope	0.50
JeC:							
Jefferson	95	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
						Slope	0.50
JeE:							
Jefferson	83	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
JnD:							
Jefferson	95	Moderate		Moderate		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.50	Slope	1.00
						Low strength	0.50
JnF:							
Jefferson	95	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
LbB:							
Lily	86	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
LbC:							
Lily	97	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Low strength	0.50
						Slope	0.50
LbD:							
Lily	88	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
LgD:							
Lily	56	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
Gilpin	36	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
LgE:							
Lily	52	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Landslides	1.00
						Low strength	0.50

Table 9.—Forest Management, Part II—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitability for roads (natural surface): Rating class and limiting features	Value
LgE:							
Gilpin	36	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Landslides	1.00
						Low strength	0.50
LmD:							
Lily	57	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
Ramsey	38	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
LmE:							
Lily	52	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Landslides	1.00
						Low strength	0.50
Ramsey	42	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Landslides	1.00
						Low strength	0.50
LoB:							
Lonewood	90	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
LoC:							
Lonewood	90	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Low strength	0.50
						Slope	0.50
LP:							
Limestone quarry	100	Not rated		Not rated		Not rated	
Me:							
Melvin	95	Slight		Slight		Poorly suited	
						Flooding	1.00
						Wetness	1.00
						Low strength	0.50
MnC:							
Minvale	95	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Low strength	0.50
						Slope	0.50
MoC:							
Montevallo	95	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
MoD:							
Montevallo	93	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
MoE:							
Montevallo	93	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00

Table 9.—Forest Management, Part II—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitability for roads (natural surface): Rating class and limiting features	Value
Pp:							
Pope	50	Slight		Slight		Poorly suited	
						Flooding	1.00
						Low strength	0.50
Philo	45	Slight		Slight		Poorly suited	
						Flooding	1.00
						Low strength	0.50
RaD:							
Ramsey	75	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
Rock outcrop	20	Not rated		Not rated		Not rated	
RaF:							
Ramsey	70	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
Rock outcrop	30	Not rated		Not rated		Not rated	
Sd:							
Shady	96	Slight		Slight		Moderately suited	
						Flooding	0.50
						Low strength	0.50
SfB:							
Shady	40	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Flooding	0.50
						Low strength	0.50
Swafford	35	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
Urban land	25	Not rated		Not rated		Not rated	
ShD:							
Shelocta	97	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Landslides	1.00
						Slope	1.00
						Low strength	0.50
SwB:							
Swafford	94	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
TaB:							
Tasso	92	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
TaC:							
Tasso	92	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Low strength	0.50
						Slope	0.50
TeB2:							
Townley	75	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50

Table 9.—Forest Management, Part II—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitability for roads (natural surface): Rating class and limiting features	Value
TeB2:							
Coile	25	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
TeC:							
Townley	96	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Low strength	0.50
						Slope	0.50
TeD:							
Townley	90	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
TeE:							
Townley	92	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
TuD:							
Townley	45	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
Armuchee	35	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
Urban land	20	Not rated		Not rated		Not rated	
TuE:							
Townley	45	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
Armuchee	35	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
Urban land	20	Not rated		Not rated		Not rated	
UrD:							
Urban land	100	Not rated		Not rated		Not rated	
W:							
Water	100	Not rated		Not rated		Not rated	
WaB:							
Waynesboro	93	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
WaC:							
Waynesboro	93	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Low strength	0.50
						Slope	0.50
WaD:							
Waynesboro	97	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50

Table 9.—Forest Management, Part II—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitability for roads (natural surface): Rating class and limiting features	Value
WeD:							
Waynesboro	45	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
Etowah	35	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
Urban land	20	Not rated		Not rated		Not rated	
WhB:							
Whitwell	94	Slight		Slight		Moderately suited	
						Flooding	0.50
						Low strength	0.50

Table 9.—Forest Management, Part III

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
AeC:							
Allen	95	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
AeD:							
Allen	95	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
						Slope	0.50
AfD:							
Allen	40	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
						Slope	0.50
Jefferson	30	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
Urban land	25	Not rated		Not rated		Not rated	
AmC:							
Armuchee	94	Moderately suited		Moderately suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50	Low strength	0.50
				Slope	0.50		
				Rock fragments	0.50		
AmD:							
Armuchee	92	Moderately suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Slope	0.75	Low strength	0.50
				Stickiness; high plasticity index	0.50		
				Rock fragments	0.50		
Sunlight	8	Not rated		Not rated		Not rated	
AmE:							
Armuchee	97	Moderately suited		Unsuited		Moderately suited	
		Stickiness; high plasticity index	0.50	Slope	1.00	Low strength	0.50
				Stickiness; high plasticity index	0.50	Slope	0.50
				Rock fragments	0.50		
ANS:							
Area not surveyed	100	Not rated		Not rated		Not rated	
ApC:							
Apison	73	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
Sunlight	27	Well suited		Moderately suited		Well suited	
				Slope	0.50		
				Rock fragments	0.50		

Table 9.—Forest Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
ApF:							
Apison	45	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Low strength	0.50
Sunlight	40	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
ASD:							
Ash disposal area	100	Not rated		Not rated		Not rated	
BeF:							
Bethesda	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50	Low strength	0.50
Mines pit	20	Not rated		Not rated		Not rated	
Bg:							
Bloomingdale	95	Moderately suited		Moderately suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50	Low strength	0.50
BrE:							
Bradyville	61	Poorly suited		Poorly suited		Well suited	
		Stickiness; high plasticity index	0.75	Stickiness; high plasticity index	0.75		
				Slope	0.50		
				Rock fragments	0.50		
Rock outcrop	39	Not rated		Not rated		Not rated	
CaB:							
Capshaw	88	Well suited		Well suited		Moderately suited	
						Low strength	0.50
CbD:							
Colbert	36	Poorly suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.75	Slope	0.75	Low strength	0.50
				Stickiness; high plasticity index	0.75		
Lyerly	34	Poorly suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.75	Slope	0.75	Low strength	0.50
				Stickiness; high plasticity index	0.75		
Rock outcrop	23	Not rated		Not rated		Not rated	
CoC:							
Collegedale	97	Moderately suited		Moderately suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50	Low strength	0.50
				Slope	0.50		
CoD:							
Collegedale	85	Moderately suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Slope	0.75	Low strength	0.50
				Stickiness; high plasticity index	0.50		

Table 9.—Forest Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
DeB:							
Dewey	90	Well suited		Well suited		Moderately suited	
						Low strength	0.50
DeC:							
Dewey	93	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
DeD:							
Dewey	93	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
				Rock fragments	0.50		
DeE:							
Dewey	90	Well suited		Unsuited		Moderately suited	
				Slope	1.00	Low strength	0.50
						Slope	0.50
EcB:							
Ealy	60	Well suited		Well suited		Moderately suited	
						Low strength	0.50
Craigsville	40	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Rock fragments	0.75	Low strength	0.50
EtB:							
Etowah	92	Well suited		Well suited		Moderately suited	
						Low strength	0.50
EtC:							
Etowah	93	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
FuB:							
Fullerton	69	Poorly suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.75	Stickiness; high plasticity index	0.75	Low strength	0.50
				Rock fragments	0.50		
Pailo	25	Well suited		Well suited		Moderately suited	
						Low strength	0.50
FuC:							
Fullerton	68	Poorly suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.75	Stickiness; high plasticity index	0.75	Low strength	0.50
				Slope	0.50		
				Rock fragments	0.50		
Pailo	20	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
FuD:							
Fullerton	67	Poorly suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.75	Slope	0.75	Low strength	0.50
				Stickiness; high plasticity index	0.75		
				Rock fragments	0.50		
Pailo	26	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50

Table 9.—Forest Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
FuE:							
Fullerton	67	Poorly suited		Unsuited		Moderately suited	
		Stickiness; high plasticity index	0.75	Slope	1.00	Low strength	0.50
				Stickiness; high plasticity index	0.75	Slope	0.50
				Rock fragments	0.50		
Pailo	30	Well suited		Unsuited		Moderately suited	
				Slope	1.00	Low strength	0.50
						Slope	0.50
FwD:							
Fullerton	45	Poorly suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.75	Slope	0.75	Low strength	0.50
				Stickiness; high plasticity index	0.75		
				Rock fragments	0.50		
Dewey	35	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
				Rock fragments	0.50		
Urban land	20	Not rated		Not rated		Not rated	
FwE:							
Fullerton	45	Poorly suited		Unsuited		Moderately suited	
		Stickiness; high plasticity index	0.75	Slope	1.00	Low strength	0.50
				Stickiness; high plasticity index	0.75	Slope	0.50
				Rock fragments	0.50		
Dewey	35	Well suited		Unsuited		Moderately suited	
				Slope	1.00	Low strength	0.50
						Slope	0.50
Urban land	20	Not rated		Not rated		Not rated	
GnD:							
Gilpin	94	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
GpE:							
Gilpin	57	Well suited		Unsuited		Moderately suited	
				Slope	1.00	Low strength	0.50
						Slope	0.50
Petros	39	Moderately suited		Unsuited		Moderately suited	
		Rock fragments	0.50	Slope	1.00	Slope	0.50
				Rock fragments	0.75		
GpF:							
Gilpin	63	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Low strength	0.50
Petros	30	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75		

Table 9.—Forest Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
GsF:							
Gilpin	37	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50	Low strength	0.50
Bouldin	36	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Rock fragments	1.00
		Rock fragments	0.50	Rock fragments	0.75	Slope	1.00
Petros	23	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75		
Ha:							
Hamblen	90	Well suited		Well suited		Moderately suited	
						Low strength	0.50
HeB:							
Hendon	96	Well suited		Well suited		Moderately suited	
						Low strength	0.50
HeC:							
Hendon	97	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
JeC:							
Jefferson	95	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
JeE:							
Jefferson	83	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
						Slope	0.50
JnD:							
Jefferson	95	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Slope	0.75	Low strength	0.50
				Rock fragments	0.75		
JnF:							
Jefferson	95	Moderately suited		Unsuited		Moderately suited	
		Slope	0.50	Slope	1.00	Slope	0.50
		Rock fragments	0.50	Rock fragments	0.75	Low strength	0.50
LbB:							
Lily	86	Well suited		Well suited		Moderately suited	
						Low strength	0.50
LbC:							
Lily	97	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
LbD:							
Lily	88	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
LgD:							
Lily	56	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50

Table 9.—Forest Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
LgD:							
Gilpin	36	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
LgE:							
Lily	52	Well suited		Unsuited		Moderately suited	
				Slope	1.00	Low strength	0.50
						Slope	0.50
Gilpin	36	Well suited		Unsuited		Moderately suited	
				Slope	1.00	Low strength	0.50
						Slope	0.50
LmD:							
Lily	57	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
Ramsey	38	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
LmE:							
Lily	52	Well suited		Unsuited		Moderately suited	
				Slope	1.00	Low strength	0.50
						Slope	0.50
Ramsey	42	Well suited		Unsuited		Moderately suited	
				Slope	1.00	Low strength	0.50
						Slope	0.50
LoB:							
Lonewood	90	Well suited		Well suited		Moderately suited	
						Low strength	0.50
LoC:							
Lonewood	90	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
LP:							
Limestone quarry	100	Not rated		Not rated		Not rated	
Me:							
Melvin	95	Well suited		Well suited		Moderately suited	
						Low strength	0.50
MnC:							
Minvale	95	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
				Rock fragments	0.50		
MoC:							
Montevallo	95	Moderately suited		Moderately suited		Well suited	
		Rock fragments	0.50	Rock fragments	0.50		
				Slope	0.50		
MoD:							
Montevallo	93	Moderately suited		Poorly suited		Well suited	
		Rock fragments	0.50	Slope	0.75		
				Rock fragments	0.50		

Table 9.—Forest Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
MoE:							
Montevallo	93	Moderately suited		Unsuited		Moderately suited	
		Rock fragments	0.50	Slope	1.00	Slope	0.50
				Rock fragments	0.50		
Pp:							
Pope	50	Well suited		Well suited		Moderately suited	
						Low strength	0.50
Philo	45	Well suited		Well suited		Moderately suited	
						Low strength	0.50
RaD:							
Ramsey	75	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
Rock outcrop	20	Not rated		Not rated		Not rated	
RaF:							
Ramsey	70	Moderately suited		Unsuited		Moderately suited	
		Slope	0.50	Slope	1.00	Slope	0.50
						Low strength	0.50
Rock outcrop	30	Not rated		Not rated		Not rated	
Sd:							
Shady	96	Well suited		Well suited		Moderately suited	
						Low strength	0.50
SfB:							
Shady	40	Well suited		Well suited		Moderately suited	
						Low strength	0.50
Swafford	35	Well suited		Well suited		Moderately suited	
						Low strength	0.50
Urban land	25	Not rated		Not rated		Not rated	
ShD:							
Shelocta	97	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
SwB:							
Swafford	94	Well suited		Well suited		Moderately suited	
						Low strength	0.50
TaB:							
Tasso	92	Well suited		Well suited		Moderately suited	
						Low strength	0.50
TaC:							
Tasso	92	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
TeB2:							
Townley	75	Moderately suited		Moderately suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50	Low strength	0.50

Table 9.—Forest Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
TeB2:							
Coile	25	Moderately suited		Moderately suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50	Low strength	0.50
				Rock fragments	0.50		
TeC:							
Townley	96	Moderately suited		Moderately suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50	Low strength	0.50
				Slope	0.50		
TeD:							
Townley	90	Moderately suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Slope	0.75	Low strength	0.50
				Stickiness; high plasticity index	0.50		
TeE:							
Townley	92	Moderately suited		Unsuited		Moderately suited	
		Stickiness; high plasticity index	0.50	Slope	1.00	Low strength	0.50
				Stickiness; high plasticity index	0.50	Slope	0.50
TuD:							
Townley	45	Moderately suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Slope	0.75	Low strength	0.50
				Stickiness; high plasticity index	0.50		
Armuchee	35	Moderately suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Slope	0.75	Low strength	0.50
				Stickiness; high plasticity index	0.50		
				Rock fragments	0.50		
Urban land	20	Not rated		Not rated		Not rated	
TuE:							
Townley	45	Moderately suited		Unsuited		Moderately suited	
		Stickiness; high plasticity index	0.50	Slope	1.00	Low strength	0.50
				Stickiness; high plasticity index	0.50	Slope	0.50
Armuchee	35	Moderately suited		Unsuited		Moderately suited	
		Stickiness; high plasticity index	0.50	Slope	1.00	Low strength	0.50
				Stickiness; high plasticity index	0.50	Slope	0.50
				Rock fragments	0.50		
Urban land	20	Not rated		Not rated		Not rated	
UrD:							
Urban land	100	Not rated		Not rated		Not rated	
W:							
Water	100	Not rated		Not rated		Not rated	

Table 9.—Forest Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
WaB:							
Waynesboro	93	Moderately suited		Moderately suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50	Low strength	0.50
WaC:							
Waynesboro	93	Moderately suited		Moderately suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Slope	0.50	Low strength	0.50
				Stickiness; high plasticity index	0.50		
WaD:							
Waynesboro	97	Moderately suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Slope	0.75	Low strength	0.50
				Stickiness; high plasticity index	0.50		
WeD:							
Waynesboro	45	Moderately suited		Moderately suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Slope	0.50	Low strength	0.50
				Stickiness; high plasticity index	0.50		
Etowah	35	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
Urban land	20	Not rated		Not rated		Not rated	
WhB:							
Whitwell	94	Well suited		Well suited		Moderately suited	
						Low strength	0.50

Table 9.—Forest Management, Part IV

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
AeC:					
Allen	95	Well suited		Well suited	
AeD:					
Allen	95	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
AfD:					
Allen	40	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Jefferson	30	Well suited		Well suited	
Urban land	25	Not rated		Not rated	
AmC:					
Armuchee	94	Well suited		Well suited	
AmD:					
Armuchee	92	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
AmE:					
Armuchee	97	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
ANS:					
Area not surveyed	100	Not rated		Not rated	
ApC:					
Apison	73	Well suited		Well suited	
Sunlight	27	Well suited		Well suited	
ApF:					
Apison	45	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Sunlight	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
ASD:					
Ash disposal area	100	Not rated		Not rated	
BeF:					
Bethesda	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Mines pit	20	Not rated		Not rated	

Table 9.—Forest Management, Part IV—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface): Rating class and limiting features	Value	Suitability for mechanical site preparation (deep): Rating class and limiting features	Value
Bg:					
Bloomingdale	95	Well suited		Well suited	
Capshaw	5	Not rated		Not rated	
BrE:					
Bradyville	61	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Stickiness; high plasticity index	0.50		
Rock outcrop	39	Not rated		Not rated	
CaB:					
Capshaw	88	Well suited		Well suited	
CbD:					
Colbert	36	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Stickiness; high plasticity index	0.50		
Lyerly	34	Poorly suited		Poorly suited	
		Stickiness; high plasticity index	0.50	Slope	0.50
				Restrictive layer	0.50
		Slope	0.50		
Rock outcrop	23	Not rated		Not rated	
CoC:					
Collegedale	97	Poorly suited		Well suited	
		Stickiness; high plasticity index	0.50		
CoD:					
Collegedale	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Stickiness; high plasticity index	0.50		
DeB:					
Dewey	90	Well suited		Well suited	
DeC:					
Dewey	93	Well suited		Well suited	
DeD:					
Dewey	93	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
DeE:					
Dewey	90	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
EcB:					
Ealy	60	Well suited		Well suited	
Craigsville	40	Poorly suited		Poorly suited	
		Rock fragments	0.50	Rock fragments	0.50

Table 9.—Forest Management, Part IV—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface): Rating class and limiting features	Value	Suitability for mechanical site preparation (deep): Rating class and limiting features	Value
EtB:					
Etowah	92	Well suited		Well suited	
EtC:					
Etowah	93	Well suited		Well suited	
FuB:					
Fullerton	69	Poorly suited		Well suited	
		Stickiness; high plasticity index	0.50		
Pailo	25	Well suited		Well suited	
FuC:					
Fullerton	68	Poorly suited		Well suited	
		Stickiness; high plasticity index	0.50		
Pailo	20	Well suited		Well suited	
FuD:					
Fullerton	67	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Stickiness; high plasticity index	0.50		
Pailo	26	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
FuE:					
Fullerton	67	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Stickiness; high plasticity index	0.50		
Pailo	30	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
FwD:					
Fullerton	45	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Stickiness; high plasticity index	0.50		
Dewey	35	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Urban land	20	Not rated		Not rated	
FwE:					
Fullerton	45	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Stickiness; high plasticity index	0.50		
Dewey	35	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Urban land	20	Not rated		Not rated	

Table 9.—Forest Management, Part IV—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
GnD:					
Gilpin	94	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
GpE:					
Gilpin	57	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Petros	39	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50		
GpF:					
Gilpin	63	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Petros	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
GsF:					
Gilpin	37	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Bouldin	36	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	1.00	Rock fragments	0.50
Petros	23	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
Ha:					
Hamblen	90	Well suited		Well suited	
HeB:					
Hendon	96	Well suited		Well suited	
HeC:					
Hendon	97	Well suited		Well suited	
JeC:					
Jefferson	95	Well suited		Well suited	
JeE:					
Jefferson	83	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
JnD:					
Jefferson	95	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50		
JnF:					
Jefferson	95	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50		

Table 9.—Forest Management, Part IV—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface): Rating class and limiting features	Value	Suitability for mechanical site preparation (deep): Rating class and limiting features	Value
LbB:					
Lily----------------	86	Well suited		Poorly suited	
				Restrictive layer	0.50
LbC:					
Lily----------------	97	Well suited		Poorly suited	
				Restrictive layer	0.50
LbD:					
Lily----------------	88	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
				Restrictive layer	0.50
LgD:					
Lily----------------	56	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
				Restrictive layer	0.50
Gilpin--------------	36	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
LgE:					
Lily----------------	52	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
				Restrictive layer	0.50
Gilpin--------------	36	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
LmD:					
Lily----------------	57	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
				Restrictive layer	0.50
Ramsey--------------	38	Poorly suited		Unsuited	
		Slope	0.50	Restrictive layer	1.00
				Slope	0.50
LmE:					
Lily----------------	52	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
				Restrictive layer	0.50
Ramsey--------------	42	Poorly suited		Unsuited	
		Slope	0.50	Restrictive layer	1.00
				Slope	0.50
LoB:					
Lonewood------------	90	Well suited		Well suited	
LoC:					
Lonewood------------	90	Well suited		Well suited	
LP:					
Limestone quarry----	100	Not rated		Not rated	
Me:					
Melvin--------------	95	Well suited		Well suited	

Table 9.—Forest Management, Part IV—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface): Rating class and limiting features	Value	Suitability for mechanical site preparation (deep): Rating class and limiting features	Value
MnC:					
Minvale	95	Well suited		Well suited	
MoC:					
Montevallo	95	Poorly suited		Well suited	
		Rock fragments	0.50		
MoD:					
Montevallo	93	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50		
MoE:					
Montevallo	93	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50		
Pp:					
Pope	50	Well suited		Well suited	
Philo	45	Well suited		Well suited	
RaD:					
Ramsey	75	Poorly suited		Unsuited	
		Slope	0.50	Restrictive layer	1.00
				Slope	0.50
Rock outcrop	20	Not rated		Not rated	
RaF:					
Ramsey	70	Poorly suited		Unsuited	
		Slope	0.50	Restrictive layer	1.00
				Slope	0.50
Rock outcrop	30	Not rated		Not rated	
Sd:					
Shady	96	Well suited		Well suited	
SfB:					
Shady	40	Well suited		Well suited	
Swafford	35	Well suited		Well suited	
Urban land	25	Not rated		Not rated	
ShD:					
Shelocta	97	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
SwB:					
Swafford	94	Well suited		Well suited	
TaB:					
Tasso	92	Well suited		Well suited	
TaC:					
Tasso	92	Well suited		Well suited	

Table 9.—Forest Management, Part IV—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface): Rating class and limiting features	Value	Suitability for mechanical site preparation (deep): Rating class and limiting features	Value
TeB2:					
Townley	75	Well suited		Well suited	
Coile	25	Poorly suited		Well suited	
		Stickiness; high plasticity index	0.50		
TeC:					
Townley	96	Well suited		Well suited	
TeD:					
Townley	90	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
TeE:					
Townley	92	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
TuD:					
Townley	45	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Armuchee	35	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Urban land	20	Not rated		Not rated	
TuE:					
Townley	45	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Armuchee	35	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Urban land	20	Not rated		Not rated	
UrD:					
Urban land	100	Not rated		Not rated	
W:					
Water	100	Not rated		Not rated	
WaB:					
Waynesboro	93	Well suited		Well suited	
WaC:					
Waynesboro	93	Well suited		Well suited	
WaD:					
Waynesboro	97	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
WeD:					
Waynesboro	45	Well suited		Well suited	
Etowah	35	Well suited		Well suited	
Urban land	20	Not rated		Not rated	

Table 9.—Forest Management, Part IV—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
WhB:					
Whitwell------------	94	Well suited		Well suited	

Table 9.—Forest Management, Part V

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire: Rating class and limiting features	Potential for damage to soil by fire: Value	Potential for seedling mortality: Rating class and limiting features	Potential for seedling mortality: Value
AeC:					
Allen	95	Low		Low	
AeD:					
Allen	95	Low		Low	
AfD:					
Allen	40	Low		Low	
Jefferson	30	Low Texture/rock fragments	 0.10	Low	
Urban land	25	Not rated		Not rated	
AmC:					
Armuchee	94	Moderate Texture/rock fragments	 0.50	Low	
AmD:					
Armuchee	92	Moderate Texture/rock fragments	 0.50	Low	
AmE:					
Armuchee	97	Moderate Texture/rock fragments	 0.50	Low	
ANS:					
Area not surveyed	100	Not rated		Not rated	
ApC:					
Apison	73	Low		Low	
Sunlight	27	Low		Low	
ApF:					
Apison	45	Moderate Texture/slope/ surface depth/ rock fragments	 0.50	Low	
Sunlight	40	High Texture/slope/ surface depth/ rock fragments	 1.00	Low	
ASD:					
Ash disposal area	100	Not rated		Not rated	

Table 9.—Forest Management, Part V—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire: Rating class and limiting features	Value	Potential for seedling mortality: Rating class and limiting features	Value
BeF:					
Bethesda------------	80	Moderate		Low	
		Texture/rock fragments	0.50		
Mines pit-----------	20	Not rated		Not rated	
Bg:					
Bloomingdale--------	95	Low		High	
		Texture/rock fragments	0.10	Wetness	1.00
BrE:					
Bradyville----------	61	Moderate		Low	
		Texture/rock fragments	0.50		
Rock outcrop--------	39	Not rated		Not rated	
CaB:					
Capshaw-------------	88	Low		Low	
CbD:					
Colbert-------------	36	Moderate		Low	
		Texture/rock fragments	0.50		
Lyerly--------------	34	Moderate		Low	
		Texture/rock fragments	0.50		
Rock outcrop--------	23	Not rated		Not rated	
CoC:					
Collegedale---------	97	Moderate		Low	
		Texture/rock fragments	0.50		
CoD:					
Collegedale---------	85	Moderate		Low	
		Texture/rock fragments	0.50		
DeB:					
Dewey---------------	90	Moderate		Low	
		Texture/rock fragments	0.50		
DeC:					
Dewey---------------	93	Moderate		Low	
		Texture/rock fragments	0.50		
DeD:					
Dewey---------------	93	Moderate		Low	
		Texture/rock fragments	0.50		

Table 9.—Forest Management, Part V—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire: Rating class and limiting features	Value	Potential for seedling mortality: Rating class and limiting features	Value
DeE:					
Dewey---------------	90	Moderate		Low	
		Texture/rock fragments	0.50		
EcB:					
Ealy----------------	60	Low		Low	
		Texture/rock fragments	0.10		
Craigsville---------	40	Low		Low	
EtB:					
Etowah--------------	92	Low		Low	
		Texture/rock fragments	0.10		
EtC:					
Etowah--------------	93	Low		Low	
		Texture/rock fragments	0.10		
FuB:					
Fullerton-----------	69	Moderate		Low	
		Texture/rock fragments	0.50		
Pailo---------------	25	Moderate		Low	
		Texture/rock fragments	0.50		
FuC:					
Fullerton-----------	68	Moderate		Low	
		Texture/rock fragments	0.50		
Pailo---------------	20	Moderate		Low	
		Texture/rock fragments	0.50		
FuD:					
Fullerton-----------	67	Moderate		Low	
		Texture/rock fragments	0.50		
Pailo---------------	26	Moderate		Low	
		Texture/rock fragments	0.50		
FuE:					
Fullerton-----------	67	Moderate		Low	
		Texture/rock fragments	0.50		
Pailo---------------	30	Moderate		Low	
		Texture/rock fragments	0.50		

Table 9.—Forest Management, Part V—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire: Rating class and limiting features	Value	Potential for seedling mortality: Rating class and limiting features	Value
FwD:					
Fullerton-----------	45	Moderate		Low	
		Texture/rock fragments	0.50		
Dewey---------------	35	Moderate		Low	
		Texture/rock fragments	0.50		
Urban land----------	20	Not rated		Not rated	
FwE:					
Fullerton-----------	45	Moderate		Low	
		Texture/rock fragments	0.50		
Dewey---------------	35	Moderate		Low	
		Texture/rock fragments	0.50		
Urban land----------	20	Not rated		Not rated	
GnD:					
Gilpin--------------	94	Low		Low	
		Texture/rock fragments	0.10		
GpE:					
Gilpin--------------	57	Low		Low	
		Texture/rock fragments	0.10		
Petros--------------	39	Low		Low	
GpF:					
Gilpin--------------	63	Low		Low	
Petros--------------	30	High		Low	
		Texture/slope/ surface depth/ rock fragments	1.00		
GsF:					
Gilpin--------------	37	Low		Low	
Bouldin-------------	36	Low		Low	
		Texture/rock fragments	0.10		
Petros--------------	23	High		Low	
		Texture/slope/ surface depth/ rock fragments	1.00		
Ha:					
Hamblen-------------	90	Low		Low	
		Texture/rock fragments	0.10		

Table 9.—Forest Management, Part V—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire: Rating class and limiting features	Value	Potential for seedling mortality: Rating class and limiting features	Value
HeB:					
Hendon	96	Low		Low	
HeC:					
Hendon	97	Low		Low	
JeC:					
Jefferson	95	Low		Low	
		Texture/rock fragments	0.10		
JeE:					
Jefferson	83	Low		Low	
		Texture/rock fragments	0.10		
JnD:					
Jefferson	95	Low		Low	
		Texture/rock fragments	0.10		
JnF:					
Jefferson	95	Low		Low	
LbB:					
Lily	86	Low		Low	
LbC:					
Lily	97	Low		Low	
LbD:					
Lily	88	Low		Low	
LgD:					
Lily	56	Low		Low	
Gilpin	36	Low		Low	
		Texture/rock fragments	0.10		
LgE:					
Lily	52	Low		Low	
Gilpin	36	Low		Low	
		Texture/rock fragments	0.10		
LmD:					
Lily	57	Low		Low	
Ramsey	38	Low		Low	
LmE:					
Lily	52	Low		Low	
Ramsey	42	Low		Low	

Table 9.—Forest Management, Part V—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire: Rating class and limiting features	Value	Potential for seedling mortality: Rating class and limiting features	Value
LoB:					
Lonewood	90	Low		Low	
		Texture/rock fragments	0.10		
LoC:					
Lonewood	90	Low		Low	
		Texture/rock fragments	0.10		
LP:					
Limestone quarry	100	Not rated		Not rated	
Me:					
Melvin	95	Moderate		High	
		Texture/rock fragments	0.50	Wetness	1.00
MnC:					
Minvale	95	Moderate		Low	
		Texture/rock fragments	0.50		
MoC:					
Montevallo	95	Low		Low	
MoD:					
Montevallo	93	Low		Low	
MoE:					
Montevallo	93	Low		Low	
Pp:					
Pope	50	Low		Low	
		Texture/rock fragments	0.10		
Philo	45	Low		Low	
		Texture/rock fragments	0.10		
RaD:					
Ramsey	75	Low		Low	
Rock outcrop	20	Not rated		Not rated	
RaF:					
Ramsey	70	High		Low	
		Texture/slope/ surface depth/ rock fragments	1.00		
Rock outcrop	30	Not rated		Not rated	
Sd:					
Shady	96	Low		Low	
		Texture/rock fragments	0.10		

Table 9.—Forest Management, Part V—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire: Rating class and limiting features	Potential for damage to soil by fire: Value	Potential for seedling mortality: Rating class and limiting features	Potential for seedling mortality: Value
SfB:					
Shady	40	Low		Low	
		Texture/rock fragments	0.10		
Swafford	35	Low		Low	
Urban land	25	Not rated		Not rated	
ShD:					
Shelocta	97	Low		Low	
SwB:					
Swafford	94	Low		Low	
TaB:					
Tasso	92	Moderate		Low	
		Texture/rock fragments	0.50		
TaC:					
Tasso	92	Moderate		Low	
		Texture/rock fragments	0.50		
TeB2:					
Townley	75	Moderate		Low	
		Texture/rock fragments	0.50		
Coile	25	Low		Low	
TeC:					
Townley	96	Moderate		Low	
		Texture/rock fragments	0.50		
TeD:					
Townley	90	Moderate		Low	
		Texture/rock fragments	0.50		
TeE:					
Townley	92	Moderate		Low	
		Texture/rock fragments	0.50		
TuD:					
Townley	45	Moderate		Low	
		Texture/rock fragments	0.50		
Armuchee	35	Moderate		Low	
		Texture/rock fragments	0.50		
Urban land	20	Not rated		Not rated	

Table 9.—Forest Management, Part V—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire: Rating class and limiting features	Value	Potential for seedling mortality: Rating class and limiting features	Value
TuE:					
Townley-------------	45	Moderate		Low	
		Texture/rock fragments	0.50		
Armuchee------------	35	Moderate		Low	
		Texture/rock fragments	0.50		
Urban land----------	20	Not rated		Not rated	
UrD:					
Urban land----------	100	Not rated		Not rated	
W:					
Water---------------	100	Not rated		Not rated	
WaB:					
Waynesboro----------	93	Moderate		Low	
		Texture/rock fragments	0.50		
WaC:					
Waynesboro----------	93	Moderate		Low	
		Texture/rock fragments	0.50		
WaD:					
Waynesboro----------	97	Moderate		Low	
		Texture/rock fragments	0.50		
WeD:					
Waynesboro----------	45	Moderate		Low	
		Texture/rock fragments	0.50		
Etowah--------------	35	Low		Low	
		Texture/rock fragments	0.10		
Urban land----------	20	Not rated		Not rated	
WhB:					
Whitwell------------	94	Low		Low	
		Texture/rock fragments	0.10		

Table 10.—Recreational Development, Part I

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Value	Picnic areas: Rating class and limiting features	Value	Playgrounds: Rating class and limiting features	Value
AeC:							
Allen	95	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
						Gravel content	0.04
AeD:							
Allen	95	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.04
AfD:							
Allen	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.04
Jefferson	30	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
Urban land	25	Not rated		Not rated		Not rated	
AmC:							
Armuchee	94	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.99	Slow water movement	0.99	Slope	1.00
		Slope	0.04	Slope	0.04	Slow water movement	0.99
						Depth to bedrock	0.65
						Gravel content	0.06
AmD:							
Armuchee	92	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.99	Slow water movement	0.99	Slow water movement	0.99
						Depth to bedrock	0.65
						Gravel content	0.06
AmE:							
Armuchee	97	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.99	Slow water movement	0.99	Slow water movement	0.99
						Depth to bedrock	0.65
						Gravel content	0.06
ANS:							
Area not surveyed	100	Not rated		Not rated		Not rated	
ApC:							
Apison	73	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.99	Slow water movement	0.99	Slope	1.00
		Slope	0.04	Slope	0.04	Slow water movement	0.99
						Depth to bedrock	0.42
						Gravel content	0.06

Table 10.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
ApC:							
Sunlight	27	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slow water movement	0.96	Slow water movement	0.96	Slope	1.00
		Gravel content	0.25	Gravel content	0.25	Gravel content	1.00
		Slope	0.04	Slope	0.04	Slow water movement	0.96
ApF:							
Apison	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.99	Slow water movement	0.99	Slow water movement	0.99
						Depth to bedrock	0.42
						Gravel content	0.06
Sunlight	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slow water movement	0.96	Slow water movement	0.96	Gravel content	1.00
		Gravel content	0.25	Gravel content	0.25	Slow water movement	0.96
ASD:							
Ash disposal area	100	Not rated		Not rated		Not rated	
BeF:							
Bethesda	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.21	Slow water movement	0.21	Gravel content	1.00
		Gravel content	0.08	Gravel content	0.08	Slow water movement	0.21
Mines pit	20	Not rated		Not rated		Not rated	
Bg:							
Bloomingdale	95	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00			Flooding	0.60
BrE:							
Bradyville	61	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.26	Gravel content	0.26	Gravel content	1.00
		Slow water movement	0.21	Slow water movement	0.21	Slow water movement	0.21
Rock outcrop	39	Not rated		Not rated		Not rated	
CaB:							
Capshaw	88	Somewhat limited		Somewhat limited		Somewhat limited	
		Slow water movement	0.96	Slow water movement	0.96	Slow water movement	0.96

Table 10.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
CbD:							
Colbert	36	Very limited		Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00	Slow water movement	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
Lyerly	34	Very limited		Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00	Slow water movement	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.42
Rock outcrop	23	Not rated		Not rated		Not rated	
CoC:							
Collegedale	97	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.21	Slow water movement	0.21	Slope	1.00
		Slope	0.04	Slope	0.04	Slow water movement	0.21
CoD:							
Collegedale	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.21	Slow water movement	0.21	Slow water movement	0.21
DeB:							
Dewey	90	Not limited		Not limited		Somewhat limited	
						Slope	0.50
DeC:							
Dewey	93	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
DeD:							
Dewey	93	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
DeE:							
Dewey	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
EcB:							
Ealy	60	Very limited		Not limited		Somewhat limited	
		Flooding	1.00			Flooding	0.60
						Gravel content	0.04
Craigsville	40	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Large stones content	0.14	Large stones content	0.14
		Large stones content	0.14			Slope	0.03
EtB:							
Etowah	92	Not limited		Not limited		Somewhat limited	
						Slope	0.50
						Gravel content	0.06
EtC:							
Etowah	93	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
						Gravel content	0.06

Table 10.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
FuB:							
Fullerton-----------	69	Somewhat limited		Somewhat limited		Very limited	
		Gravel content	0.26	Gravel content	0.26	Gravel content	1.00
						Slope	0.50
Pailo---------------	25	Somewhat limited		Somewhat limited		Very limited	
		Gravel content	0.67	Gravel content	0.67	Gravel content	1.00
FuC:							
Fullerton-----------	68	Somewhat limited		Somewhat limited		Very limited	
		Gravel content	0.26	Gravel content	0.26	Slope	1.00
		Slope	0.04	Slope	0.04	Gravel content	1.00
Pailo---------------	20	Somewhat limited		Somewhat limited		Very limited	
		Gravel content	0.67	Gravel content	0.67	Gravel content	1.00
		Slope	0.04	Slope	0.04	Slope	1.00
FuD:							
Fullerton-----------	67	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.26	Gravel content	0.26	Gravel content	1.00
Pailo---------------	26	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.67	Gravel content	0.67	Gravel content	1.00
FuE:							
Fullerton-----------	67	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.26	Gravel content	0.26	Gravel content	1.00
Pailo---------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.67	Gravel content	0.67	Gravel content	1.00
FwD:							
Fullerton-----------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.26	Gravel content	0.26	Gravel content	1.00
Dewey---------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Urban land----------	20	Not rated		Not rated		Not rated	
FwE:							
Fullerton-----------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.26	Gravel content	0.26	Gravel content	1.00
Dewey---------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Urban land----------	20	Not rated		Not rated		Not rated	
GnD:							
Gilpin--------------	94	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.84
						Gravel content	0.50

Table 10.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Value	Picnic areas: Rating class and limiting features	Value	Playgrounds: Rating class and limiting features	Value
GpE:							
Gilpin	57	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.84
						Gravel content	0.50
Petros	39	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Gravel content	0.32	Gravel content	0.32	Gravel content	1.00
GpF:							
Gilpin	63	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.84
						Gravel content	0.50
Petros	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Gravel content	0.32	Gravel content	0.32	Gravel content	1.00
GsF:							
Gilpin	37	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.19	Large stones content	0.19	Depth to bedrock	0.84
						Gravel content	0.50
						Large stones content	0.19
Bouldin	36	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	1.00	Large stones content	1.00	Large stones content	1.00
						Gravel content	0.86
Petros	23	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Gravel content	0.32	Gravel content	0.32	Gravel content	1.00
Ha:							
Hamblen	90	Very limited		Not limited		Somewhat limited	
		Flooding	1.00			Flooding	0.60
HeB:							
Hendon	96	Not limited		Not limited		Somewhat limited	
						Slope	0.50
HeC:							
Hendon	97	Not limited		Not limited		Very limited	
						Slope	1.00
JeC:							
Jefferson	95	Not limited		Not limited		Very limited	
						Slope	1.00
JeE:							
Jefferson	83	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00

Table 10.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Value	Picnic areas: Rating class and limiting features	Value	Playgrounds: Rating class and limiting features	Value
JnD:							
Jefferson-----------	95	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.71
JnF:							
Jefferson-----------	95	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.71
LbB:							
Lily----------------	86	Not limited		Not limited		Somewhat limited	
						Slope	0.50
						Depth to bedrock	0.46
LbC:							
Lily----------------	97	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
						Depth to bedrock	0.46
LbD:							
Lily----------------	88	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.46
LgD:							
Lily----------------	56	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.46
Gilpin--------------	36	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.84
						Gravel content	0.50
LgE:							
Lily----------------	52	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.46
Gilpin--------------	36	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.84
						Gravel content	0.50
LmD:							
Lily----------------	57	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.46
Ramsey--------------	38	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
						Gravel content	0.22
LmE:							
Lily----------------	52	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.46

Table 10.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
LmE: Ramsey	42	Very limited Slope Depth to bedrock	 1.00 1.00	Very limited Slope Depth to bedrock	 1.00 1.00	Very limited Slope Depth to bedrock Gravel content	 1.00 1.00 0.22
LoB: Lonewood	90	Not limited		Not limited		Somewhat limited Slope	 0.50
LoC: Lonewood	90	Somewhat limited Slope	 0.04	Somewhat limited Slope	 0.04	Very limited Slope	 1.00
LP: Limestone quarry	100	Not rated		Not rated		Not rated	
Me: Melvin	95	Very limited Depth to saturated zone Flooding	 1.00 1.00	Very limited Depth to saturated zone Flooding	 1.00 0.40	Very limited Depth to saturated zone Flooding	 1.00 1.00
MnC: Minvale	95	Somewhat limited Gravel content Slope	 0.25 0.04	Somewhat limited Gravel content Slope	 0.25 0.04	Very limited Slope Gravel content	 1.00 1.00
MoC: Montevallo	95	Very limited Depth to bedrock Gravel content Slope	 1.00 0.41 0.04	Very limited Depth to bedrock Gravel content Slope	 1.00 0.41 0.04	Very limited Depth to bedrock Gravel content Slope	 1.00 1.00 1.00
MoD: Montevallo	93	Very limited Slope Depth to bedrock Gravel content	 1.00 1.00 0.41	Very limited Slope Depth to bedrock Gravel content	 1.00 1.00 0.41	Very limited Slope Depth to bedrock Gravel content	 1.00 1.00 1.00
MoE: Montevallo	93	Very limited Slope Depth to bedrock Gravel content	 1.00 1.00 0.41	Very limited Slope Depth to bedrock Gravel content	 1.00 1.00 0.41	Very limited Slope Depth to bedrock Gravel content	 1.00 1.00 1.00
Pp: Pope	50	Very limited Flooding	 1.00	Somewhat limited Flooding	 0.40	Very limited Flooding Gravel content	 1.00 0.06
Philo	45	Very limited Flooding Depth to saturated zone	 1.00 0.07	Somewhat limited Flooding Depth to saturated zone	 0.40 0.03	Very limited Flooding Depth to saturated zone Gravel content	 1.00 0.07 0.06

Table 10.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
RaD:							
Ramsey	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
						Gravel content	0.22
Rock outcrop	20	Not rated		Not rated		Not rated	
RaF:							
Ramsey	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
						Gravel content	0.22
Rock outcrop	30	Not rated		Not rated		Not rated	
Sd:							
Shady	96	Very limited		Not limited		Somewhat limited	
		Flooding	1.00			Flooding	0.60
						Gravel content	0.06
SfB:							
Shady	40	Very limited		Not limited		Somewhat limited	
		Flooding	1.00			Flooding	0.60
						Slope	0.50
						Gravel content	0.06
Swafford	35	Not limited		Not limited		Somewhat limited	
						Slope	0.50
Urban land	25	Not rated		Not rated		Not rated	
ShD:							
Shelocta	97	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.22
SwB:							
Swafford	94	Not limited		Not limited		Somewhat limited	
						Slope	0.50
TaB:							
Tasso	92	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to cemented pan	0.90	Depth to cemented pan	0.90	Depth to cemented pan	0.90
						Slope	0.50
						Gravel content	0.04
TaC:							
Tasso	92	Somewhat limited		Somewhat limited		Very limited	
		Depth to cemented pan	0.90	Depth to cemented pan	0.90	Slope	1.00
		Slope	0.04	Slope	0.04	Depth to cemented pan	0.90
						Gravel content	0.04

Table 10.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Value	Picnic areas: Rating class and limiting features	Value	Playgrounds: Rating class and limiting features	Value
TeB2:							
Townley	75	Somewhat limited		Somewhat limited		Somewhat limited	
		Slow water movement	0.99	Slow water movement	0.99	Slow water movement	0.99
						Slope	0.50
						Gravel content	0.48
						Depth to bedrock	0.46
Coile	25	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
						Slope	0.50
TeC:							
Townley	96	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.96	Slow water movement	0.96	Slope	1.00
		Slope	0.01	Slope	0.01	Slow water movement	0.96
						Gravel content	0.48
						Depth to bedrock	0.46
TeD:							
Townley	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.96	Slow water movement	0.96	Slow water movement	0.96
						Gravel content	0.48
						Depth to bedrock	0.46
TeE:							
Townley	92	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.96	Slow water movement	0.96	Slow water movement	0.96
						Gravel content	0.48
						Depth to bedrock	0.46
TuD:							
Townley	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.96	Slow water movement	0.96	Slow water movement	0.96
						Gravel content	0.48
						Depth to bedrock	0.46
Armuchee	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.99	Slow water movement	0.99	Slow water movement	0.99
						Depth to bedrock	0.65
						Gravel content	0.06
Urban land	20	Not rated		Not rated		Not rated	
TuE:							
Townley	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.96	Slow water movement	0.96	Slow water movement	0.96
						Gravel content	0.48
						Depth to bedrock	0.46

Table 10.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
TuE:							
Armuchee	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.99	Slow water movement	0.99	Slow water movement	0.99
						Depth to bedrock	0.65
						Gravel content	0.06
Urban land	20	Not rated		Not rated		Not rated	
UrD:							
Urban land	100	Not rated		Not rated		Not rated	
W:							
Water	100	Not rated		Not rated		Not rated	
WaB:							
Waynesboro	93	Not limited		Not limited		Somewhat limited	
						Slope	0.50
WaC:							
Waynesboro	93	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
WaD:							
Waynesboro	97	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
WeD:							
Waynesboro	45	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
Etowah	35	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
						Gravel content	0.06
Urban land	20	Not rated		Not rated		Not rated	
WhB:							
Whitwell	94	Very limited		Not limited		Somewhat limited	
		Flooding	1.00			Flooding	0.60
						Gravel content	0.04

Table 10.—Recreational Development, Part II

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
AeC:							
Allen	95	Not limited		Not limited		Somewhat limited	
						Slope	0.04
AeD:							
Allen	95	Somewhat limited		Not limited		Very limited	
		Slope	0.68			Slope	1.00
AfD:							
Allen	40	Somewhat limited		Not limited		Very limited	
		Slope	0.68			Slope	1.00
Jefferson	30	Not limited		Not limited		Somewhat limited	
						Slope	0.63
Urban land	25	Not rated		Not rated		Not rated	
AmC:							
Armuchee	94	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Droughty	0.88
						Depth to bedrock	0.65
						Slope	0.04
AmD:							
Armuchee	92	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.02			Droughty	0.88
						Depth to bedrock	0.65
AmE:							
Armuchee	97	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	1.00	Slope	0.04	Droughty	0.88
						Depth to bedrock	0.65
ANS:							
Area not surveyed	100	Not rated		Not rated		Not rated	
ApC:							
Apison	73	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Depth to bedrock	0.42
						Droughty	0.07
						Slope	0.04
Sunlight	27	Not limited		Not limited		Very limited	
						Depth to bedrock	1.00
						Droughty	1.00
						Gravel content	0.25
						Slope	0.04
ApF:							
Apison	45	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Slope	1.00
		Water erosion	1.00	Slope	1.00	Depth to bedrock	0.42
						Droughty	0.07

Table 10.—Recreational Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
ApF:							
Sunlight------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	1.00
						Droughty	1.00
						Gravel content	0.25
ASD:							
Ash disposal area---	100	Not rated		Not rated		Not rated	
BeF:							
Bethesda------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.08
						Large stones content	0.03
Mines pit-----------	20	Not rated		Not rated		Not rated	
Bg:							
Bloomingdale--------	95	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
						Flooding	0.60
BrE:							
Bradyville----------	61	Not limited		Not limited		Very limited	
						Slope	1.00
						Large stones content	0.32
						Gravel content	0.26
Rock outcrop--------	39	Not rated		Not rated		Not rated	
CaB:							
Capshaw-------------	88	Not limited		Not limited		Not limited	
CbD:							
Colbert-------------	36	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.18				
Lyerly--------------	34	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.18			Depth to bedrock	0.42
Rock outcrop--------	23	Not rated		Not rated		Not rated	
CoC:							
Collegedale---------	97	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.04
CoD:							
Collegedale---------	85	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.02				
DeB:							
Dewey---------------	90	Not limited		Not limited		Not limited	

Table 10.—Recreational Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
DeC:							
Dewey	93	Not limited		Not limited		Somewhat limited	
						Slope	0.04
DeD:							
Dewey	93	Somewhat limited		Not limited		Very limited	
		Slope	0.02			Slope	1.00
DeE:							
Dewey	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Slope	0.04	Slope	1.00
EcB:							
Ealy	60	Not limited		Not limited		Somewhat limited	
						Flooding	0.60
Craigsville	40	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.14	Large stones content	0.14	Large stones content	1.00
						Droughty	0.07
EtB:							
Etowah	92	Not limited		Not limited		Not limited	
EtC:							
Etowah	93	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.04
FuB:							
Fullerton	69	Not limited		Not limited		Somewhat limited	
						Gravel content	0.26
						Large stones content	0.05
Pailo	25	Not limited		Not limited		Somewhat limited	
						Gravel content	0.67
						Droughty	0.25
						Large stones content	0.01
FuC:							
Fullerton	68	Not limited		Not limited		Somewhat limited	
						Gravel content	0.26
						Large stones content	0.05
						Slope	0.04
Pailo	20	Not limited		Not limited		Somewhat limited	
						Gravel content	0.67
						Droughty	0.25
						Slope	0.04
						Large stones content	0.01
FuD:							
Fullerton	67	Somewhat limited		Not limited		Very limited	
		Slope	0.02			Slope	1.00
						Gravel content	0.26
						Large stones content	0.05

Table 10.—Recreational Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
FuD:							
Pailo	26	Somewhat limited		Not limited		Very limited	
		Slope	0.02			Slope	1.00
						Gravel content	0.67
						Droughty	0.25
						Large stones	0.01
FuE:							
Fullerton	67	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Slope	0.08	Slope	1.00
						Gravel content	0.26
						Large stones content	0.05
Pailo	30	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Slope	0.08	Slope	1.00
						Gravel content	0.67
						Droughty	0.25
						Large stones content	0.01
FwD:							
Fullerton	45	Somewhat limited		Not limited		Very limited	
		Slope	0.02			Slope	1.00
						Gravel content	0.26
						Large stones content	0.05
Dewey	35	Somewhat limited		Not limited		Very limited	
		Slope	0.02			Slope	1.00
Urban land	20	Not rated		Not rated		Not rated	
FwE:							
Fullerton	45	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Slope	0.04	Slope	1.00
						Gravel content	0.26
						Large stones content	0.05
Dewey	35	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Slope	0.04	Slope	1.00
Urban land	20	Not rated		Not rated		Not rated	
GnD:							
Gilpin	94	Somewhat limited		Not limited		Very limited	
		Slope	0.02			Slope	1.00
						Depth to bedrock	0.84
						Droughty	0.03
GpE:							
Gilpin	57	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Slope	0.08	Slope	1.00
						Depth to bedrock	0.84
						Droughty	0.03

Table 10.—Recreational Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
GpE:							
Petros	39	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Slope	0.08	Slope	1.00
						Droughty	1.00
						Depth to bedrock	1.00
						Gravel content	0.32
GpF:							
Gilpin	63	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.84
						Droughty	0.03
Petros	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	1.00
						Depth to bedrock	1.00
						Gravel content	0.32
GsF:							
Gilpin	37	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.19	Large stones content	0.19	Depth to bedrock	0.84
						Droughty	0.03
Bouldin	36	Very limited		Very limited		Very limited	
		Slope	1.00	Large stones content	1.00	Slope	1.00
		Large stones content	1.00	Slope	1.00	Large stones content	0.99
						Droughty	0.34
Petros	23	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	1.00
						Depth to bedrock	1.00
						Gravel content	0.32
Ha:							
Hamblen	90	Not limited		Not limited		Somewhat limited	
						Flooding	0.60
HeB:							
Hendon	96	Not limited		Not limited		Not limited	
HeC:							
Hendon	97	Not limited		Not limited		Not limited	
JeC:							
Jefferson	95	Not limited		Not limited		Not limited	
JeE:							
Jefferson	83	Somewhat limited		Not limited		Very limited	
		Slope	0.98			Slope	1.00
JnD:							
Jefferson	95	Somewhat limited		Not limited		Very limited	
		Slope	0.02			Slope	1.00
						Large stones content	0.84

Table 10.—Recreational Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
JnD:							
Jefferson	95	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Slope	0.78	Slope	1.00
						Large stones content	0.84
LbB:							
Lily	86	Not limited		Not limited		Somewhat limited	
						Depth to bedrock	0.46
LbC:							
Lily	97	Not limited		Not limited		Somewhat limited	
						Depth to bedrock	0.46
						Slope	0.04
LbD:							
Lily	88	Somewhat limited		Not limited		Very limited	
		Slope	0.02			Slope	1.00
						Depth to bedrock	0.46
LgD:							
Lily	56	Somewhat limited		Not limited		Very limited	
		Slope	0.02			Slope	1.00
						Depth to bedrock	0.46
Gilpin	36	Somewhat limited		Not limited		Very limited	
		Slope	0.02			Slope	1.00
						Depth to bedrock	0.84
						Droughty	0.03
LgE:							
Lily	52	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Slope	0.08	Slope	1.00
						Depth to bedrock	0.46
Gilpin	36	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Slope	0.08	Slope	1.00
						Depth to bedrock	0.84
						Droughty	0.03
LmD:							
Lily	57	Somewhat limited		Not limited		Very limited	
		Slope	0.02			Slope	1.00
						Depth to bedrock	0.46
Ramsey	38	Somewhat limited		Not limited		Very limited	
		Slope	0.02			Depth to bedrock	1.00
						Droughty	1.00
						Slope	1.00
LmE:							
Lily	52	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Slope	0.08	Slope	1.00
						Depth to bedrock	0.46
Ramsey	42	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Slope	0.08	Slope	1.00
						Depth to bedrock	1.00
						Droughty	1.00

Table 10.—Recreational Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
LoB:							
Lonewood	90	Not limited		Not limited		Not limited	
LoC:							
Lonewood	90	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.04
LP:							
Limestone quarry	100	Not rated		Not rated		Not rated	
Me:							
Melvin	95	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
MnC:							
Minvale	95	Not limited		Not limited		Somewhat limited	
						Gravel content	0.25
						Slope	0.04
MoC:							
Montevallo	95	Not limited		Not limited		Very limited	
						Droughty	1.00
						Depth to bedrock	1.00
						Gravel content	0.41
						Slope	0.04
MoD:							
Montevallo	93	Somewhat limited		Not limited		Very limited	
		Slope	0.02			Droughty	1.00
						Depth to bedrock	1.00
						Slope	1.00
						Gravel content	0.41
MoE:							
Montevallo	93	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Slope	0.04	Slope	1.00
						Droughty	1.00
						Depth to bedrock	1.00
						Gravel content	0.41
Pp:							
Pope	50	Somewhat limited		Somewhat limited		Very limited	
		Flooding	0.40	Flooding	0.40	Flooding	1.00
Philo	45	Somewhat limited		Somewhat limited		Very limited	
		Flooding	0.40	Flooding	0.40	Flooding	1.00
						Depth to saturated zone	0.03
RaD:							
Ramsey	75	Somewhat limited		Not limited		Very limited	
		Slope	0.02			Depth to bedrock	1.00
						Droughty	1.00
						Slope	1.00
Rock outcrop	20	Not rated		Not rated		Not rated	

Table 10.—Recreational Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
RaF:							
Ramsey	70	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Slope	0.78	Slope	1.00
						Depth to bedrock	1.00
						Droughty	1.00
Rock outcrop	30	Not rated		Not rated		Not rated	
Sd:							
Shady	96	Not limited		Not limited		Somewhat limited	
						Flooding	0.60
SfB:							
Shady	40	Not limited		Not limited		Somewhat limited	
						Flooding	0.60
Swafford	35	Not limited		Not limited		Not limited	
Urban land	25	Not rated		Not rated		Not rated	
ShD:							
Shelocta	97	Somewhat limited		Not limited		Very limited	
		Slope	0.08			Slope	1.00
SwB:							
Swafford	94	Not limited		Not limited		Not limited	
TaB:							
Tasso	92	Not limited		Not limited		Somewhat limited	
						Depth to cemented pan	0.90
TaC:							
Tasso	92	Not limited		Not limited		Somewhat limited	
						Depth to cemented pan	0.90
						Slope	0.04
TeB2:							
Townley	75	Not limited		Not limited		Somewhat limited	
						Depth to bedrock	0.46
Coile	25	Not limited		Not limited		Very limited	
						Depth to bedrock	1.00
TeC:							
Townley	96	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Depth to bedrock	0.46
						Slope	0.01
TeD:							
Townley	90	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.02			Depth to bedrock	0.46
TeE:							
Townley	92	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	1.00	Slope	0.04	Depth to bedrock	0.46

Table 10.—Recreational Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
TuD:							
Townley	45	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.02			Depth to bedrock	0.46
Armuchee	35	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.02			Droughty	0.88
						Depth to bedrock	0.65
Urban land	20	Not rated		Not rated		Not rated	
TuE:							
Townley	45	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	1.00	Slope	0.04	Depth to bedrock	0.46
Armuchee	35	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	1.00	Slope	0.04	Droughty	0.88
						Depth to bedrock	0.65
Urban land	20	Not rated		Not rated		Not rated	
UrD:							
Urban land	100	Not rated		Not rated		Not rated	
W:							
Water	100	Not rated		Not rated		Not rated	
WaB:							
Waynesboro	93	Not limited		Not limited		Not limited	
WaC:							
Waynesboro	93	Not limited		Not limited		Somewhat limited	
						Slope	0.04
WaD:							
Waynesboro	97	Somewhat limited		Not limited		Very limited	
		Slope	0.02			Slope	1.00
WeD:							
Waynesboro	45	Not limited		Not limited		Somewhat limited	
						Slope	0.63
Etowah	35	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.63
Urban land	20	Not rated		Not rated		Not rated	
WhB:							
Whitwell	94	Not limited		Not limited		Somewhat limited	
						Flooding	0.60

Table 11.—Wildlife Habitat

(See text for definitions of terms used in this table. Absence of an entry indicates that no rating is applicable)

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for: Openland wildlife	Woodland wildlife	Wetland wildlife
AeC:										
Allen	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
AeD:										
Allen	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
AfD:										
Allen	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
Jefferson	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
Urban land.										
AmC:										
Armuchee	Fair	Good	Good	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
AmD:										
Armuchee	Poor	Fair	Good	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
AmE:										
Armuchee	Very poor	Poor	Good	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
ANS.										
Area not surveyed										
ApC:										
Apison	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Sunlight	Poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
ApF:										
Apison	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
Sunlight	Very poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
ASD.										
Ash disposal area										
BeF:										
Bethesda	Very poor	Very poor	Poor	Poor	Poor	Very poor	Very poor	Very poor	Poor	Very poor
Mines pit.										

Table 11.—Wildlife Habitat—Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for		
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
Bg:										
Bloomingdale	Very poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good
BrE:										
Bradyville	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
Rock outcrop.										
CaB:										
Capshaw	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
CbD:										
Colbert	Fair	Good	Fair	Good	Good	Very poor	Very poor	Fair	Good	Very poor
Lyerly	Fair	Good	Good	Fair	Fair	Poor	Poor	Good	Fair	Poor
Rock outcrop.										
CoC:										
Collegedale	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
CoD:										
Collegedale	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
DeB:										
Dewey	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
DeC:										
Dewey	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
DeD:										
Dewey	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
DeE:										
Dewey	Very poor	Very poor	Fair	Good	Good	Very poor	Very poor	Poor	Poor	Very poor
EcB:										
Ealy	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
Craigsville	Poor	Fair	Fair	Fair	Fair	Poor	Very poor	Fair	Fair	Very poor
EtB:										
Etowah	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor

Table 11.—Wildlife Habitat—Continued

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for: Openland wildlife	Woodland wildlife	Wetland wildlife
EtC:										
Etowah	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
FuB:										
Fullerton	Very poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
Pailo	Fair	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
FuC:										
Fullerton	Very poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
Pailo	Fair	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
FuD:										
Fullerton	Very poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
Pailo	Fair	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
FuE:										
Fullerton	Very poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
Pailo	Fair	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
FwD:										
Fullerton	Very poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
Dewey	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Urban land.										
FwE:										
Fullerton	Very poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
Dewey	Very poor	Very poor	Fair	Good	Good	Very poor	Very poor	Poor	Poor	Very poor
Urban land.										
GnD:										
Gilpin	Fair	Good	Good	Fair	Fair	Very poor	Very poor	Good	Fair	Very poor

Table 11.—Wildlife Habitat—Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for		
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
GpE:										
Gilpin	Very poor	Poor	Good	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
Petros	Very poor	Poor	Poor	Very poor	Very poor	Very poor	Very poor	Poor	Very poor	Very poor
GpF:										
Gilpin	Very poor	Poor	Good	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
Petros	Very poor	Poor	Poor	Very poor	Very poor	Very poor	Very poor	Poor	Very poor	Very poor
GsF:										
Gilpin	Very poor	Poor	Good	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
Bouldin	Very poor	Very poor	Fair	Good	Good	Very poor	Very poor	Poor	Fair	Very poor
Petros	Very poor	Poor	Poor	Very poor	Very poor	Very poor	Very poor	Poor	Very poor	Very poor
Ha:										
Hamblen	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
HeB:										
Hendon	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
HeC:										
Hendon	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
JeC:										
Jefferson	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
JeE:										
Jefferson	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
JnD:										
Jefferson	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
JnF:										
Jefferson	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
LbB:										
Lily	Fair	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
LbC:										
Lily	Fair	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor

Table 11.—Wildlife Habitat—Continued

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for: Openland wildlife	Woodland wildlife	Wetland wildlife
LbD:										
Lily	Fair	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
LgD:										
Lily	Fair	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
Gilpin	Fair	Good	Good	Fair	Fair	Very poor	Very poor	Good	Fair	Very poor
LgE:										
Lily	Fair	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
Gilpin	Fair	Good	Good	Fair	Fair	Very poor	Very poor	Good	Fair	Very poor
LmD:										
Lily	Fair	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
Ramsey	Very poor	Poor	Poor	Very poor	Very poor	Very poor	Very poor	Very poor	Poor	Very poor
LmE:										
Lily	Fair	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
Ramsey	Very poor	Poor	Poor	Very poor	Very poor	Very poor	Very poor	Very poor	Poor	Very poor
LoB:										
Lonewood	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
LoC:										
Lonewood	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
LP.										
Limestone quarry										
Me:										
Melvin	Very poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good
MnC:										
Minvale	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
MoC:										
Montevallo	Poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
MoD:										
Montevallo	Poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor

Table 11.—Wildlife Habitat—Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for		
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
MoE:										
Montevallo	Poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
Pp:										
Pope	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
Philo	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
RaD:										
Ramsey	Very poor	Poor	Poor	Very poor	Very poor	Very poor	Very poor	Very poor	Poor	Very poor
Rock outcrop.										
RaF:										
Ramsey	Very poor	Poor	Poor	Very poor	Very poor	Very poor	Very poor	Very poor	Poor	Very poor
Rock outcrop.										
Sd:										
Shady	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
SfB:										
Shady	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Swafford	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
Urban land.										
ShD:										
Shelocta	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
SwB:										
Swafford	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
TaB:										
Tasso	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
TaC:										
Tasso	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
TeB2:										
Townley	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Coile	Poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
TeC:										
Townley	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor

Table 11.—Wildlife Habitat—Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for		
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hard- wood trees	Conif- erous plants	Wetland plants	Shallow water areas	Open- land wild- life	Wood- land wild- life	Wetland wild- life
TeD:										
Townley	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
TeE:										
Townley	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
TuD:										
Townley	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Armuchee	Poor	Fair	Good	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
Urban land.										
TuE:										
Townley	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Armuchee	Very poor	Poor	Good	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
Urban land.										
UrD.										
Urban land										
W.										
Water										
WaB:										
Waynesboro	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
WaC:										
Waynesboro	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
WaD:										
Waynesboro	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
WeD:										
Waynesboro	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Etowah	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Urban land.										
WhB:										
Whitwell	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor

Table 12.—Building Site Development, Part I

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
AeC:							
Allen----------------	95	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
AeD:							
Allen----------------	95	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
AfD:							
Allen----------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Jefferson------------	30	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
Urban land-----------	25	Not rated		Not rated		Not rated	
AmC:							
Armuchee------------	94	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.50	Depth to soft bedrock	0.64	Slope	1.00
		Slope	0.04	Shrink-swell	0.50	Shrink-swell	0.50
				Slope	0.04		
AmD:							
Armuchee------------	92	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Depth to soft bedrock	0.64	Shrink-swell	0.50
				Shrink-swell	0.50		
AmE:							
Armuchee------------	97	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Depth to soft bedrock	0.64	Shrink-swell	0.50
				Shrink-swell	0.50		
ANS:							
Area not surveyed---	100	Not rated		Not rated		Not rated	
ApC:							
Apison--------------	73	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Depth to soft bedrock	0.42	Slope	1.00
				Slope	0.04		
Sunlight------------	27	Somewhat limited		Very limited		Very limited	
		Depth to soft bedrock	0.50	Depth to soft bedrock	1.00	Depth to soft bedrock	1.00
		Slope	0.04	Slope	0.04	Slope	1.00

Table 12.—Building Site Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
ApF:							
Apison	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to soft bedrock	0.42		
Sunlight	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to soft bedrock	0.50	Depth to soft bedrock	1.00	Depth to soft bedrock	1.00
ASD:							
Ash disposal area	100	Not rated		Not rated		Not rated	
BeF:							
Bethesda	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Mines pit	20	Not rated		Not rated		Not rated	
Bg:							
Bloomingdale	95	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
BrE:							
Bradyville	61	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
				Depth to hard bedrock	0.42		
Rock outcrop	39	Not rated		Not rated		Not rated	
CaB:							
Capshaw	88	Not limited		Somewhat limited		Not limited	
				Depth to saturated zone	0.99		
				Shrink-swell	0.50		
CbD:							
Colbert	36	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to saturated zone	0.47		
				Depth to hard bedrock	0.04		
Lyerly	34	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.42	Slope	1.00	Depth to hard bedrock	0.42
Rock outcrop	23	Not rated		Not rated		Not rated	

Table 12.—Building Site Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
CoC:							
Collegedale---------	97	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Slope	1.00
		Slope	0.04	Slope	0.04	Shrink-swell	0.50
CoD:							
Collegedale---------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
DeB:							
Dewey---------------	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
DeC:							
Dewey---------------	93	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Slope	1.00
		Slope	0.04	Slope	0.04	Shrink-swell	0.50
DeD:							
Dewey---------------	93	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
DeE:							
Dewey---------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
EcB:							
Ealy----------------	60	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
				Depth to saturated zone	0.03		
Craigsville---------	40	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Large stones content	1.00	Large stones content	1.00	Large stones content	1.00
				Depth to saturated zone	0.03		
EtB:							
Etowah--------------	92	Not limited		Not limited		Not limited	
EtC:							
Etowah--------------	93	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
FuB:							
Fullerton-----------	69	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Pailo---------------	25	Not limited		Not limited		Not limited	
FuC:							
Fullerton-----------	68	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Slope	1.00
		Slope	0.04	Slope	0.04	Shrink-swell	0.50

Table 12.—Building Site Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
FuC:							
Pailo	20	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
FuD:							
Fullerton	67	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Pailo	26	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
FuE:							
Fullerton	67	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Pailo	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
FwD:							
Fullerton	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Dewey	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Urban land	20	Not rated		Not rated		Not rated	
FwE:							
Fullerton	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Dewey	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Urban land	20	Not rated		Not rated		Not rated	
GnD:							
Gilpin	94	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to soft bedrock	0.84		
GpE:							
Gilpin	57	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to soft bedrock	0.84		
Petros	39	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to soft bedrock	0.50	Depth to soft bedrock	1.00	Depth to soft bedrock	1.00

Table 12.—Building Site Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
GpF:							
Gilpin	63	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to soft bedrock	0.84		
Petros	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to soft bedrock	0.50	Depth to soft bedrock	1.00	Depth to soft bedrock	1.00
GsF:							
Gilpin	37	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to soft bedrock	0.84		
Bouldin	36	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.35	Large stones content	0.35	Large stones content	0.35
Petros	23	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to soft bedrock	0.50	Depth to soft bedrock	1.00	Depth to soft bedrock	1.00
Ha:							
Hamblen	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
				Depth to saturated zone	0.99		
HeB:							
Hendon	96	Not limited		Not limited		Not limited	
HeC:							
Hendon	97	Not limited		Not limited		Somewhat limited	
						Slope	0.88
JeC:							
Jefferson	95	Not limited		Not limited		Somewhat limited	
						Slope	0.88
JeE:							
Jefferson	83	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
JnD:							
Jefferson	95	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
JnF:							
Jefferson	95	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
LbB:							
Lily	86	Somewhat limited		Very limited		Somewhat limited	
		Depth to hard bedrock	0.46	Depth to hard bedrock	1.00	Depth to hard bedrock	0.46

Table 12.—Building Site Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
LbC:							
Lily	97	Somewhat limited		Very limited		Very limited	
		Depth to hard bedrock	0.46	Depth to hard bedrock	1.00	Slope	1.00
		Slope	0.04	Slope	0.04	Depth to hard bedrock	0.46
LbD:							
Lily	88	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.46	Slope	1.00	Depth to hard bedrock	0.46
LgD:							
Lily	56	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.46	Slope	1.00	Depth to hard bedrock	0.46
Gilpin	36	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to soft bedrock	0.84		
LgE:							
Lily	52	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.46	Depth to hard bedrock	1.00	Depth to hard bedrock	0.46
Gilpin	36	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to soft bedrock	0.84		
LmD:							
Lily	57	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.46	Slope	1.00	Depth to hard bedrock	0.46
Ramsey	38	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Depth to hard bedrock	1.00
LmE:							
Lily	52	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.46	Depth to hard bedrock	1.00	Depth to hard bedrock	0.46
Ramsey	42	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
LoB:							
Lonewood	90	Not limited		Not limited		Not limited	

Table 12.—Building Site Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
LoC:							
Lonewood------------	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
LP:							
Limestone quarry----	100	Not rated		Not rated		Not rated	
Me:							
Melvin--------------	95	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
MnC:							
Minvale-------------	95	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
MoC:							
Montevallo----------	95	Somewhat limited		Very limited		Very limited	
		Depth to soft bedrock	0.50	Depth to soft bedrock	1.00	Depth to soft bedrock	1.00
		Slope	0.04	Slope	0.04	Slope	1.00
MoD:							
Montevallo----------	93	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to soft bedrock	1.00	Slope	1.00
		Depth to soft bedrock	0.50	Slope	1.00	Depth to soft bedrock	1.00
MoE:							
Montevallo----------	93	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to soft bedrock	0.50	Depth to soft bedrock	1.00	Depth to soft bedrock	1.00
Pp:							
Pope----------------	50	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
Philo---------------	45	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.07	Depth to saturated zone	1.00	Depth to saturated zone	0.07
RaD:							
Ramsey--------------	75	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Depth to hard bedrock	1.00
Rock outcrop--------	20	Not rated		Not rated		Not rated	
RaF:							
Ramsey--------------	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
Rock outcrop--------	30	Not rated		Not rated		Not rated	

Table 12.—Building Site Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
Sd:							
Shady	96	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
				Depth to saturated zone	0.03		
SfB:							
Shady	40	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
				Depth to saturated zone	0.03		
Swafford	35	Not limited		Very limited		Not limited	
				Depth to saturated zone	0.99		
Urban land	25	Not rated		Not rated		Not rated	
ShD:							
Shelocta	97	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
SwB:							
Swafford	94	Not limited		Very limited		Not limited	
				Depth to saturated zone	0.99		
TaB:							
Tasso	92	Not limited		Not limited		Not limited	
TaC:							
Tasso	92	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
TeB2:							
Townley	75	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
				Depth to soft bedrock	0.46		
Coile	25	Somewhat limited		Very limited		Somewhat limited	
		Depth to soft bedrock	0.50	Depth to soft bedrock	1.00	Depth to soft bedrock	1.00
TeC:							
Townley	96	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Slope	1.00
		Slope	0.01	Depth to soft bedrock	0.46	Shrink-swell	0.50
				Slope	0.01		
TeD:							
Townley	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
				Depth to soft bedrock	0.46		

Table 12.—Building Site Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
TeE:							
Townley	92	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
				Depth to soft bedrock	0.46		
TuD:							
Townley	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
				Depth to soft bedrock	0.46		
Armuchee	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Depth to soft bedrock	0.64	Shrink-swell	0.50
				Shrink-swell	0.50		
Urban land	20	Not rated		Not rated		Not rated	
TuE:							
Townley	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
				Depth to soft bedrock	0.46		
Armuchee	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Depth to soft bedrock	0.64	Shrink-swell	0.50
				Shrink-swell	0.50		
Urban land	20	Not rated		Not rated		Not rated	
UrD:							
Urban land	100	Not rated		Not rated		Not rated	
W:							
Water	100	Not rated		Not rated		Not rated	
WaB:							
Waynesboro	93	Not limited		Not limited		Not limited	
WaC:							
Waynesboro	93	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
WaD:							
Waynesboro	97	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
WeD:							
Waynesboro	45	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00

Table 12.—Building Site Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
WeD:							
Etowah--------------	35	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
Urban land----------	20	Not rated		Not rated		Not rated	
WhB:							
Whitwell------------	94	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
				Depth to saturated zone	0.99		

Table 12.—Building Site Development, Part II

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
AeC:							
Allen	95	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.04	Cutbanks cave	1.00	Slope	0.04
				Slope	0.04		
AeD:							
Allen	95	Very limited		Very limited		Very limited	
		Too steep	1.00	Cutbanks cave	1.00	Too steep	1.00
				Too steep	1.00		
AfD:							
Allen	43	Very limited		Very limited		Very limited	
		Too steep	1.00	Cutbanks cave	1.00	Too steep	1.00
				Too steep	1.00		
Jefferson	32	Very limited		Very limited		Somewhat limited	
		Low strength	1.00	Cutbanks cave	1.00	Slope	0.63
		Slope	0.63	Slope	0.63		
Urban land	25	Not rated		Not rated		Not rated	
AmC:							
Armuchee	94	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Depth to soft bedrock	0.99	Depth to bedrock	0.99
		Low strength	0.22			Droughty	0.88
		Slope	0.04	Cutbanks cave	0.10	Slope	0.04
				Slope	0.04		
AmD:							
Armuchee	92	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Shrink-swell	0.50	Depth to soft bedrock	0.99	Depth to bedrock	0.99
		Low strength	0.22			Droughty	0.88
				Cutbanks cave	0.10		
AmE:							
Armuchee	97	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Shrink-swell	0.50	Depth to soft bedrock	0.99	Depth to bedrock	0.99
		Low strength	0.22			Droughty	0.88
				Cutbanks cave	0.10		
ANS:							
Area not surveyed	100	Not rated		Not rated		Not rated	
ApC:							
Apison	73	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.04	Depth to soft bedrock	0.97	Depth to bedrock	0.97
						Droughty	0.07
				Cutbanks cave	0.10	Slope	0.04
				Slope	0.04		

Table 12.—Building Site Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
ApC:							
Sunlight	27	Somewhat limited		Very limited		Very limited	
		Depth to soft bedrock	1.00	Depth to soft bedrock	1.00	Depth to bedrock	1.00
		Slope	0.04	Cutbanks cave	0.10	Droughty	1.00
				Slope	0.04	Gravel	0.25
						Slope	0.04
ApF:							
Apison	50	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
				Depth to soft bedrock	0.97	Depth to bedrock	0.97
				Cutbanks cave	0.10	Droughty	0.07
Sunlight	44	Very limited		Very limited		Very limited	
		Too steep	1.00	Depth to soft bedrock	1.00	Too steep	1.00
		Depth to soft bedrock	1.00	Too steep	1.00	Depth to bedrock	1.00
				Cutbanks cave	0.10	Droughty	1.00
						Gravel	0.25
ASD:							
Ash disposal area	100	Not rated		Not rated		Not rated	
BeF:							
Bethesda	80	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
				Cutbanks cave	0.10	Gravel	0.01
Mines pit	20	Not rated		Not rated		Not rated	
Bg:							
Bloomingdale	95	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	0.60	Flooding	0.60
		Low strength	1.00	Too clayey	0.28		
		Shrink-swell	0.50	Cutbanks cave	0.10		
BrE:							
Bradyville	61	Very limited		Very limited		Very limited	
		Low strength	1.00	Too steep	1.00	Too steep	1.00
		Too steep	1.00	Depth to hard bedrock	0.88	Gravel	0.11
		Shrink-swell	0.50	Too clayey	0.50	Large stones	0.05
				Cutbanks cave	0.10		
Rock outcrop	39	Not rated		Not rated		Not rated	
CaB:							
Capshaw	88	Very limited		Somewhat limited		Not limited	
		Low strength	1.00	Depth to saturated zone	0.99		
				Too clayey	0.28		
				Cutbanks cave	0.10		

Table 12.—Building Site Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
CbD:							
Colbert	36	Very limited		Very limited		Very limited	
		Low strength	1.00	Too steep	1.00	Too steep	1.00
		Shrink-swell	1.00	Too clayey	0.99		
		Too steep	1.00	Depth to saturated zone	0.47		
				Cutbanks cave	0.10		
				Depth to hard bedrock	0.01		
Lyerly	34	Very limited		Very limited		Very limited	
		Low strength	1.00	Depth to hard bedrock	1.00	Too steep	1.00
		Shrink-swell	1.00			Depth to bedrock	0.01
		Too steep	1.00	Too clayey	1.00		
		Depth to hard bedrock	0.01	Too steep	1.00		
				Cutbanks cave	0.10		
Rock outcrop	23	Not rated		Not rated		Not rated	
CoC:							
Collegedale	97	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Too clayey	0.50	Slope	0.04
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Slope	0.04	Slope	0.04		
CoD:							
Collegedale	85	Very limited		Very limited		Very limited	
		Low strength	1.00	Too steep	1.00	Too steep	1.00
		Too steep	1.00	Too clayey	0.50		
		Shrink-swell	0.50	Cutbanks cave	0.10		
DeB:							
Dewey	90	Somewhat limited		Somewhat limited		Not limited	
		Shrink-swell	0.50	Too clayey	0.72		
		Low strength	0.10	Cutbanks cave	0.10		
DeC:							
Dewey	93	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Too clayey	0.72	Slope	0.04
		Low strength	0.10	Cutbanks cave	0.10		
		Slope	0.04	Slope	0.04		
DeD:							
Dewey	93	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Shrink-swell	0.50	Too clayey	0.72		
		Low strength	0.10	Cutbanks cave	0.10		
DeE:							
Dewey	90	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Shrink-swell	0.50	Too clayey	0.72		
		Low strength	0.10	Cutbanks cave	0.10		
EcB:							
Ealy	60	Somewhat limited		Somewhat limited		Not limited	
		Flooding	0.40	Cutbanks cave	0.10		
				Depth to saturated zone	0.03		

Table 12.—Building Site Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
EcB:							
Craigsville	40	Somewhat limited		Very limited		Somewhat limited	
		Flooding	0.40	Cutbanks cave	1.00	Large stones	0.99
		Large stones	0.30	Large stones	0.30	Droughty	0.07
				Depth to saturated zone	0.03		
EtB:							
Etowah	92	Somewhat limited		Somewhat limited		Not limited	
		Low strength	0.22	Cutbanks cave	0.10		
EtC:							
Etowah	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Low strength	0.22	Cutbanks cave	0.10	Slope	0.04
		Slope	0.04	Slope	0.04		
FuB:							
Fullerton	69	Somewhat limited		Very limited		Somewhat limited	
		Shrink-swell	0.50	Cutbanks cave	1.00	Gravel	0.03
		Low strength	0.10	Too clayey	0.88		
Pailo	25	Not limited		Very limited		Somewhat limited	
				Cutbanks cave	1.00	Gravel	0.86
				Too clayey	0.02	Droughty	0.14
FuC:							
Fullerton	68	Somewhat limited		Very limited		Somewhat limited	
		Shrink-swell	0.50	Cutbanks cave	1.00	Slope	0.04
		Low strength	0.10	Too clayey	0.88	Gravel	0.03
		Slope	0.04	Slope	0.04		
Pailo	20	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.04	Cutbanks cave	1.00	Gravel	0.86
				Slope	0.04	Droughty	0.14
				Too clayey	0.02	Slope	0.04
FuD:							
Fullerton	67	Very limited		Very limited		Very limited	
		Too steep	1.00	Cutbanks cave	1.00	Too steep	1.00
		Shrink-swell	0.50	Too steep	1.00	Gravel	0.03
		Low strength	0.10	Too clayey	0.88		
Pailo	26	Very limited		Very limited		Very limited	
		Too steep	1.00	Cutbanks cave	1.00	Too steep	1.00
				Too steep	1.00	Gravel	0.86
				Too clayey	0.02	Droughty	0.14
FuE:							
Fullerton	67	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Shrink-swell	0.50	Cutbanks cave	1.00	Gravel	0.03
		Low strength	0.10	Too clayey	0.88		
Pailo	30	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
				Cutbanks cave	1.00	Gravel	0.86
				Too clayey	0.02	Droughty	0.14

Table 12.—Building Site Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
FwD:							
Fullerton	45	Very limited		Very limited		Very limited	
		Too steep	1.00	Cutbanks cave	1.00	Too steep	1.00
		Shrink-swell	0.50	Too steep	1.00	Gravel	0.03
		Low strength	0.10	Too clayey	0.88		
Dewey	35	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Shrink-swell	0.50	Too clayey	0.72		
		Low strength	0.10	Cutbanks cave	0.10		
Urban land	20	Not rated		Not rated		Not rated	
FwE:							
Fullerton	45	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Shrink-swell	0.50	Cutbanks cave	1.00	Gravel	0.03
		Low strength	0.10	Too clayey	0.88		
Dewey	35	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Shrink-swell	0.50	Too clayey	0.72		
		Low strength	0.10	Cutbanks cave	0.10		
Urban land	20	Not rated		Not rated		Not rated	
GnD:							
Gilpin	94	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Low strength	1.00	Depth to soft bedrock	0.84	Depth to bedrock	0.84
						Droughty	0.03
				Cutbanks cave	0.10		
GpE:							
Gilpin	57	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Low strength	1.00	Depth to soft bedrock	0.84	Depth to bedrock	0.84
						Droughty	0.03
				Cutbanks cave	0.10		
Petros	39	Very limited		Very limited		Very limited	
		Too steep	1.00	Depth to soft bedrock	1.00	Too steep	1.00
		Depth to soft bedrock	1.00			Droughty	1.00
				Too steep	1.00	Depth to bedrock	1.00
						Gravel	0.38
GpF:							
Gilpin	63	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Low strength	1.00	Depth to soft bedrock	0.84	Depth to bedrock	0.84
						Droughty	0.03
				Cutbanks cave	0.10		
Petros	30	Very limited		Very limited		Very limited	
		Too steep	1.00	Depth to soft bedrock	1.00	Too steep	1.00
		Depth to soft bedrock	1.00			Droughty	1.00
				Too steep	1.00	Depth to bedrock	1.00
						Gravel	0.38

Table 12.—Building Site Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
GsF:							
Gilpin	37	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Low strength	1.00	Depth to soft bedrock	0.84	Depth to bedrock	0.84
						Droughty	0.03
				Cutbanks cave	0.10		
Bouldin	36	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Large stones	0.03	Cutbanks cave	0.10	Large stones	0.99
				Large stones	0.03	Droughty	0.34
Petros	23	Very limited		Very limited		Very limited	
		Too steep	1.00	Depth to soft bedrock	1.00	Too steep	1.00
		Depth to soft bedrock	1.00			Droughty	1.00
				Too steep	1.00	Depth to bedrock	1.00
						Gravel	0.38
Ha:							
Hamblen	90	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Depth to saturated zone	0.99	Flooding	0.60
		Low strength	0.78				
				Flooding	0.60		
				Cutbanks cave	0.10		
HeB:							
Hendon	96	Very limited		Somewhat limited		Not limited	
		Low strength	1.00	Cutbanks cave	0.10		
HeC:							
Hendon	97	Very limited		Somewhat limited		Not limited	
		Low strength	1.00	Cutbanks cave	0.10		
JeC:							
Jefferson	95	Very limited		Very limited		Not limited	
		Low strength	1.00	Cutbanks cave	1.00		
JeE:							
Jefferson	83	Very limited		Very limited		Very limited	
		Too steep	1.00	Cutbanks cave	1.00	Too steep	1.00
		Low strength	1.00	Too steep	1.00		
JnD:							
Jefferson	95	Very limited		Very limited		Very limited	
		Too steep	1.00	Cutbanks cave	1.00	Too steep	1.00
				Too steep	1.00	Large stones	0.61
JnF:							
Jefferson	95	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
				Cutbanks cave	1.00	Large stones	0.61
LbB:							
Lily	86	Somewhat limited		Very limited		Somewhat limited	
		Depth to hard bedrock	0.46	Depth to hard bedrock	1.00	Depth to bedrock	0.46
				Cutbanks cave	0.10		

Table 12.—Building Site Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
LbC:							
Lily	94	Somewhat limited		Very limited		Somewhat limited	
		Depth to hard bedrock	0.46	Depth to hard bedrock	1.00	Depth to bedrock	0.46
		Slope	0.04	Cutbanks cave	0.10	Slope	0.04
				Slope	0.04		
LbD:							
Lily	88	Very limited		Very limited		Very limited	
		Too steep	1.00	Depth to hard bedrock	1.00	Too steep	1.00
		Depth to hard bedrock	0.46	Too steep	1.00	Depth to bedrock	0.46
				Cutbanks cave	0.10		
LgD:							
Lily	47	Very limited		Very limited		Very limited	
		Too steep	1.00	Depth to hard bedrock	1.00	Too steep	1.00
		Depth to hard bedrock	0.46	Too steep	1.00	Depth to bedrock	0.46
				Cutbanks cave	0.10		
Gilpin	39	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Low strength	1.00	Depth to soft bedrock	0.84	Depth to bedrock	0.84
				Cutbanks cave	0.10	Droughty	0.03
LgE:							
Lily	52	Very limited		Very limited		Very limited	
		Too steep	1.00	Depth to hard bedrock	1.00	Too steep	1.00
		Depth to hard bedrock	0.46	Too steep	1.00	Depth to bedrock	0.46
				Cutbanks cave	0.10		
Gilpin	36	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Low strength	1.00	Depth to soft bedrock	0.84	Depth to bedrock	0.84
				Cutbanks cave	0.10	Droughty	0.03
LmD:							
Lily	54	Very limited		Very limited		Very limited	
		Too steep	1.00	Depth to hard bedrock	1.00	Too steep	1.00
		Depth to hard bedrock	0.46	Too steep	1.00	Depth to bedrock	0.46
				Cutbanks cave	0.10		
Ramsey	38	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
						Droughty	1.00
		Too steep	1.00	Too steep	1.00	Too steep	1.00
LmE:							
Lily	52	Very limited		Very limited		Very limited	
		Too steep	1.00	Depth to hard bedrock	1.00	Too steep	1.00
		Depth to hard bedrock	0.46	Too steep	1.00	Depth to bedrock	0.46
				Cutbanks cave	0.10		

Table 12.—Building Site Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
LmE:							
Ramsey	42	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Too steep	1.00
		Too steep	1.00	Too steep	1.00	Depth to bedrock	1.00
						Droughty	1.00
LoB:							
Lonewood	90	Somewhat limited		Somewhat limited		Not limited	
		Low strength	0.22	Cutbanks cave	0.10		
LoC:							
Lonewood	84	Somewhat limited		Somewhat limited		Somewhat limited	
		Low strength	0.22	Cutbanks cave	0.10	Slope	0.04
		Slope	0.04	Slope	0.04		
LP:							
Limestone quarry	100	Not rated		Not rated		Not rated	
Me:							
Melvin	95	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	1.00	Flooding	0.80	Depth to saturated zone	1.00
		Low strength	1.00	Cutbanks cave	0.10		
MnC:							
Minvale	95	Somewhat limited		Very limited		Somewhat limited	
		Low strength	0.78	Cutbanks cave	1.00	Gravel	0.08
		Slope	0.04	Slope	0.04	Slope	0.04
				Too clayey	0.02		
MoC:							
Montevallo	95	Somewhat limited		Very limited		Very limited	
		Depth to soft bedrock	1.00	Depth to soft bedrock	1.00	Droughty	1.00
		Slope	0.04	Slope	0.04	Depth to bedrock	1.00
						Gravel	0.95
						Slope	0.04
MoD:							
Montevallo	93	Very limited		Very limited		Very limited	
		Depth to soft bedrock	1.00	Depth to soft bedrock	1.00	Droughty	1.00
		Too steep	1.00	Too steep	1.00	Depth to bedrock	1.00
						Too steep	1.00
						Gravel	0.95
MoE:							
Montevallo	93	Very limited		Very limited		Very limited	
		Too steep	1.00	Depth to soft bedrock	1.00	Too steep	1.00
		Depth to soft bedrock	1.00	Too steep	1.00	Droughty	1.00
						Depth to bedrock	1.00
						Gravel	0.95
Pp:							
Pope	50	Very limited		Very limited		Very limited	
		Flooding	1.00	Cutbanks cave	1.00	Flooding	1.00
				Flooding	0.80		

Table 12.—Building Site Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
Pp:							
Philo	45	Very limited		Very limited		Very limited	
		Flooding	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Depth to saturated zone	0.03	Cutbanks cave	1.00	Depth to saturated zone	0.03
				Flooding	0.80		
RaD:							
Ramsey	75	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
						Droughty	1.00
		Too steep	1.00	Too steep	1.00	Too steep	1.00
Rock outcrop	20	Not rated		Not rated		Not rated	
RaF:							
Ramsey	70	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Too steep	1.00
						Depth to bedrock	1.00
		Too steep	1.00	Too steep	1.00	Droughty	1.00
Rock outcrop	30	Not rated		Not rated		Not rated	
Sd:							
Shady	96	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Cutbanks cave	1.00	Flooding	0.60
				Flooding	0.60		
				Depth to saturated zone	0.03		
SfB:							
Shady	40	Not limited		Very limited		Not limited	
				Cutbanks cave	1.00		
				Depth to saturated zone	0.03		
Swafford	35	Very limited		Somewhat limited		Not limited	
		Low strength	1.00	Depth to saturated zone	0.99		
				Cutbanks cave	0.10		
Urban land	25	Not rated		Not rated		Not rated	
ShD:							
Shelocta	97	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
				Cutbanks cave	0.10		
SwB:							
Swafford	94	Very limited		Somewhat limited		Not limited	
		Low strength	1.00	Depth to saturated zone	0.99		
				Cutbanks cave	0.10		
TaB:							
Tasso	94	Not limited		Very limited		Not limited	
				Cutbanks cave	1.00		
				Too clayey	0.02		

Table 12.—Building Site Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
TaC:							
Tasso	92	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.04	Cutbanks cave	1.00	Slope	0.04
				Slope	0.04		
				Too clayey	0.02		
TeB2:							
Townley	71	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Depth to soft bedrock	0.64	Depth to bedrock	0.65
		Shrink-swell	0.50	Too clayey	0.28		
				Cutbanks cave	0.10		
Coile	21	Very limited		Very limited		Very limited	
		Depth to soft bedrock	1.00	Depth to soft bedrock	1.00	Depth to bedrock	1.00
		Low strength	1.00	Cutbanks cave	0.10		
TeC:							
Townley	96	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Too clayey	0.28	Depth to bedrock	0.06
		Shrink-swell	0.50	Cutbanks cave	0.10	Slope	0.01
		Slope	0.01	Depth to soft bedrock	0.06		
				Slope	0.01		
TeD:							
Townley	90	Very limited		Very limited		Very limited	
		Low strength	1.00	Too steep	1.00	Too steep	1.00
		Too steep	1.00	Too clayey	0.28	Depth to bedrock	0.06
		Shrink-swell	0.50	Cutbanks cave	0.10		
				Depth to soft bedrock	0.06		
TeE:							
Townley	92	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Low strength	1.00	Too clayey	0.28	Depth to bedrock	0.06
		Shrink-swell	0.50	Cutbanks cave	0.10		
				Depth to soft bedrock	0.06		
TuD:							
Townley	45	Very limited		Very limited		Very limited	
		Low strength	1.00	Too steep	1.00	Too steep	1.00
		Too steep	1.00	Too clayey	0.28	Depth to bedrock	0.06
		Shrink-swell	0.50	Cutbanks cave	0.10		
				Depth to soft bedrock	0.06		
Armuchee	35	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Shrink-swell	0.50	Depth to soft bedrock	0.99	Depth to bedrock	0.99
		Low strength	0.22	Cutbanks cave	0.10	Droughty	0.88
Urban land	20	Not rated		Not rated		Not rated	

Table 12.—Building Site Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
TuE:							
Townley	45	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Low strength	1.00	Too clayey	0.28	Depth to bedrock	0.06
		Shrink-swell	0.50	Cutbanks cave	0.10		
				Depth to soft bedrock	0.06		
Armuchee	35	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Shrink-swell	0.50	Depth to soft bedrock	0.99	Depth to bedrock	0.99
		Low strength	0.22			Droughty	0.88
				Cutbanks cave	0.10		
Urban land	20	Not rated		Not rated		Not rated	
UrD:							
Urban land	100	Not rated		Not rated		Not rated	
W:							
Water	100	Not rated		Not rated		Not rated	
WaB:							
Waynesboro	93	Somewhat limited		Somewhat limited		Not limited	
		Low strength	0.10	Cutbanks cave	0.10		
				Too clayey	0.04		
WaC:							
Waynesboro	93	Somewhat limited		Somewhat limited		Somewhat limited	
		Low strength	0.10	Cutbanks cave	0.10	Slope	0.04
		Slope	0.04	Too clayey	0.04		
				Slope	0.04		
WaD:							
Waynesboro	97	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Low strength	0.10	Cutbanks cave	0.10		
				Too clayey	0.04		
WeD:							
Waynesboro	45	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.63	Slope	0.63	Slope	0.63
		Low strength	0.10	Cutbanks cave	0.10		
				Too clayey	0.04		
Etowah	35	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.63	Slope	0.63	Slope	0.63
		Low strength	0.22	Cutbanks cave	0.10		
Urban land	20	Not rated		Not rated		Not rated	
WhB:							
Whitwell	94	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Depth to saturated zone	0.99	Flooding	0.60
				Flooding	0.60		
				Cutbanks cave	0.10		

Table 13.—Sanitary Facilities, Part I

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
AeC:					
Allen	95	Somewhat limited		Very limited	
		Slow water movement	0.50	Slope	1.00
		Slope	0.04	Seepage	0.53
AeD:					
Allen	95	Very limited		Very limited	
		Too steep	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.53
AfD:					
Allen	43	Very limited		Very limited	
		Too steep	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.53
Jefferson	32	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Slope	0.63	Slope	1.00
		Slow water movement	0.46		
		Depth to bedrock	0.30		
Urban land	25	Not rated		Not rated	
AmC:					
Armuchee	94	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	0.04	Slope	1.00
AmD:					
Armuchee	92	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Too steep	1.00	Slope	1.00
AmE:					
Armuchee	97	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Too steep	1.00	Slope	1.00
ANS:					
Area not surveyed	100	Not rated		Not rated	

Table 13.—Sanitary Facilities, Part I—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
ApC:					
Apison	73	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	0.04	Slope	1.00
				Seepage	0.53
Sunlight	27	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	0.04	Slope	1.00
				Seepage	0.53
ApF:					
Apison	50	Very limited		Very limited	
		Too steep	1.00	Depth to soft bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
				Seepage	0.53
Sunlight	44	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Too steep	1.00	Slope	1.00
				Seepage	0.53
ASD:					
Ash disposal area	100	Not rated		Not rated	
BeF:					
Bethesda	80	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Too steep	1.00	Seepage	0.53
Mines pit	20	Not rated		Not rated	
Bg:					
Bloomingdale	95	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.46	Seepage	0.53
BrE:					
Bradyville	61	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Too steep	1.00	Depth to hard bedrock	0.88
		Depth to bedrock	0.96		
Rock outcrop	39	Not rated		Not rated	
CaB:					
Capshaw	88	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Seepage	0.53
				Slope	0.32

Table 13.—Sanitary Facilities, Part I—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
CbD:					
Colbert	36	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Too steep	1.00	Depth to saturated zone	0.40
		Depth to saturated zone	0.94	Depth to hard bedrock	0.01
		Depth to bedrock	0.36		
Lyerly	34	Very limited		Very limited	
		Slow water movement	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Too steep	1.00		
Rock outcrop	23	Not rated		Not rated	
CoC:					
Collegedale	97	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Slope	0.04		
CoD:					
Collegedale	85	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Too steep	1.00		
DeB:					
Dewey	90	Somewhat limited		Somewhat limited	
		Slow water movement	0.50	Seepage	0.53
				Slope	0.32
DeC:					
Dewey	93	Somewhat limited		Very limited	
		Slow water movement	0.50	Slope	1.00
		Slope	0.04	Seepage	0.53
DeD:					
Dewey	93	Very limited		Very limited	
		Too steep	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.53
DeE:					
Dewey	90	Very limited		Very limited	
		Too steep	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.53
EcB:					
Ealy	60	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Flooding	0.40	Flooding	0.40
		Depth to saturated zone	0.08		

Table 13.—Sanitary Facilities, Part I—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
EcB:					
Craigsville----------	40	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Large stones	0.70
		Flooding	0.40	Flooding	0.40
		Large stones	0.30	Slope	0.02
		Depth to saturated zone	0.08		
EtB:					
Etowah--------------	92	Somewhat limited		Somewhat limited	
		Slow water movement	0.46	Seepage	0.53
				Slope	0.32
EtC:					
Etowah--------------	90	Somewhat limited		Very limited	
		Slow water movement	0.46	Slope	1.00
		Slope	0.04	Seepage	0.53
FuB:					
Fullerton-----------	69	Somewhat limited		Somewhat limited	
		Slow water movement	0.46	Seepage	0.53
				Slope	0.32
Pailo---------------	25	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
				Slope	0.32
FuC:					
Fullerton-----------	68	Somewhat limited		Very limited	
		Slow water movement	0.46	Slope	1.00
		Slope	0.04	Seepage	0.53
Pailo---------------	20	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Slope	0.04	Slope	1.00
FuD:					
Fullerton-----------	67	Very limited		Very limited	
		Too steep	1.00	Slope	1.00
		Slow water movement	0.46	Seepage	0.53
Pailo---------------	26	Very limited		Very limited	
		Seepage, bottom layer	1.00	Slope	1.00
		Too steep	1.00	Seepage	1.00
FuE:					
Fullerton-----------	67	Very limited		Very limited	
		Too steep	1.00	Slope	1.00
		Slow water movement	0.46	Seepage	0.53

Table 13.—Sanitary Facilities, Part I—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
FuE:					
Pailo	30	Very limited		Very limited	
		Too steep	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
FwD:					
Fullerton	45	Very limited		Very limited	
		Too steep	1.00	Slope	1.00
		Slow water movement	0.46	Seepage	0.53
Dewey	35	Very limited		Very limited	
		Too steep	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.53
Urban land	20	Not rated		Not rated	
FwE:					
Fullerton	45	Very limited		Very limited	
		Too steep	1.00	Slope	1.00
		Slow water movement	0.46	Seepage	0.53
Dewey	35	Very limited		Very limited	
		Too steep	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.53
Urban land	20	Not rated		Not rated	
GnD:					
Gilpin	94	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Too steep	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.53
GpE:					
Gilpin	57	Very limited		Very limited	
		Too steep	1.00	Depth to soft bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.53
Petros	39	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Too steep	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
GpF:					
Gilpin	63	Very limited		Very limited	
		Too steep	1.00	Depth to soft bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.53

Table 13.—Sanitary Facilities, Part I—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
GpF:					
Petros	30	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Too steep	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
GsF:					
Gilpin	37	Very limited		Very limited	
		Too steep	1.00	Depth to soft bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.53
Bouldin	36	Very limited		Very limited	
		Too steep	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Large stones	0.03		
Petros	23	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Too steep	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
Ha:					
Hamblen	90	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.46	Seepage	0.53
HeB:					
Hendon	96	Somewhat limited		Somewhat limited	
		Slow water movement	0.46	Seepage	0.53
				Slope	0.32
HeC:					
Hendon	97	Somewhat limited		Very limited	
		Slow water movement	0.46	Slope	1.00
				Seepage	0.53
JeC:					
Jefferson	95	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.46	Slope	1.00
		Depth to bedrock	0.30		
JeE:					
Jefferson	83	Very limited		Very limited	
		Too steep	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.46		
		Depth to bedrock	0.30		

Table 13.—Sanitary Facilities, Part I—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
JnD:					
Jefferson-----------	95	Very limited		Very limited	
		Too steep	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
				Large stones	0.01
		Depth to bedrock	0.30		
JnF:					
Jefferson-----------	95	Very limited		Very limited	
		Too steep	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
				Large stones	0.01
		Depth to bedrock	0.30		
LbB:					
Lily----------------	86	Very limited		Very limited	
		Seepage, bottom layer	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Seepage	1.00
				Slope	0.32
LbC:					
Lily----------------	94	Very limited		Very limited	
		Seepage, bottom layer	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Seepage	1.00
		Slope	0.04	Slope	1.00
LbD:					
Lily----------------	88	Very limited		Very limited	
		Seepage, bottom layer	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Too steep	1.00	Seepage	1.00
LgD:					
Lily----------------	47	Very limited		Very limited	
		Seepage, bottom layer	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Too steep	1.00	Seepage	1.00
Gilpin--------------	39	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Too steep	1.00		
		Slow water movement	0.50	Slope	1.00
				Seepage	0.53
LgE:					
Lily----------------	52	Very limited		Very limited	
		Too steep	1.00	Depth to hard bedrock	1.00
		Seepage, bottom layer	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00
Gilpin--------------	36	Very limited		Very limited	
		Too steep	1.00	Depth to soft bedrock	1.00
		Depth to bedrock	1.00		
		Slow water movement	0.50	Slope	1.00
				Seepage	0.53

Table 13.—Sanitary Facilities, Part I—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
LmD:					
Lily	54	Very limited		Very limited	
		Seepage, bottom layer	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Too steep	1.00	Seepage	1.00
Ramsey	38	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Seepage, bottom layer	1.00	Slope	1.00
		Too steep	1.00	Seepage	1.00
LmE:					
Lily	52	Very limited		Very limited	
		Too steep	1.00	Depth to hard bedrock	1.00
		Seepage, bottom layer	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00
Ramsey	42	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Too steep	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
LoB:					
Lonewood	90	Somewhat limited		Somewhat limited	
		Depth to bedrock	0.52	Seepage	0.53
		Slow water movement	0.46	Slope	0.32
				Depth to soft bedrock	0.08
LoC:					
Lonewood	84	Somewhat limited		Very limited	
		Depth to bedrock	0.52	Slope	1.00
		Slow water movement	0.46	Seepage	0.53
		Slope	0.04	Depth to soft bedrock	0.08
LP:					
Limestone quarry	100	Not rated		Not rated	
Me:					
Melvin	95	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.46	Seepage	0.53
MnC:					
Minvale	95	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.46	Slope	1.00
		Slope	0.04		

Table 13.—Sanitary Facilities, Part I—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
MoC:					
Montevallo----------	95	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	0.04	Slope	1.00
				Seepage	0.50
MoD:					
Montevallo----------	93	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Too steep	1.00	Slope	1.00
				Seepage	0.50
MoE:					
Montevallo----------	93	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Too steep	1.00	Slope	1.00
				Seepage	0.50
Pp:					
Pope----------------	50	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
Philo---------------	45	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
		Slow water movement	0.46		
RaD:					
Ramsey--------------	75	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Seepage, bottom layer	1.00	Slope	1.00
		Too steep	1.00	Seepage	1.00
Rock outcrop--------	20	Not rated		Not rated	
RaF:					
Ramsey--------------	70	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Too steep	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
Rock outcrop--------	30	Not rated		Not rated	

Table 13.—Sanitary Facilities, Part I—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
Sd:					
Shady	96	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.46		
		Depth to saturated zone	0.08		
SfB:					
Shady	40	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
				Slope	0.32
		Slow water movement	0.46		
		Depth to saturated zone	0.08		
Swafford	35	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.46	Seepage	1.00
				Slope	0.32
Urban land	25	Not rated		Not rated	
ShD:					
Shelocta	97	Very limited		Very limited	
		Too steep	1.00	Slope	1.00
				Seepage	1.00
SwB:					
Swafford	94	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.46	Seepage	1.00
				Slope	0.32
TaB:					
Tasso	94	Very limited		Somewhat limited	
		Slow water movement	1.00	Seepage	0.53
				Slope	0.32
TaC:					
Tasso	92	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
				Seepage	0.53
		Slope	0.04		
TeB2:					
Townley	71	Very limited		Very limited	
		Slow water movement	1.00	Depth to soft bedrock	1.00
		Depth to bedrock	1.00	Slope	0.32
Coile	21	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
				Slope	0.32
				Seepage	0.18

Table 13.—Sanitary Facilities, Part I—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
TeC:					
Townley	96	Very limited		Very limited	
		Slow water movement	1.00	Depth to soft bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slope	0.01		
TeD:					
Townley	90	Very limited		Very limited	
		Slow water movement	1.00	Depth to soft bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Too steep	1.00		
TeE:					
Townley	92	Very limited		Very limited	
		Slow water movement	1.00	Depth to soft bedrock	1.00
		Too steep	1.00	Slope	1.00
		Depth to bedrock	1.00		
TuD:					
Townley	45	Very limited		Very limited	
		Slow water movement	1.00	Depth to soft bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Too steep	1.00		
Armuchee	35	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Too steep	1.00	Slope	1.00
Urban land	20	Not rated		Not rated	
TuE:					
Townley	45	Very limited		Very limited	
		Slow water movement	1.00	Depth to soft bedrock	1.00
		Too steep	1.00	Slope	1.00
		Depth to bedrock	1.00		
Armuchee	35	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Too steep	1.00	Slope	1.00
Urban land	20	Not rated		Not rated	
UrD:					
Urban land	100	Not rated		Not rated	
W:					
Water	100	Not rated		Not rated	
WaB:					
Waynesboro	93	Somewhat limited		Somewhat limited	
		Slow water movement	0.46	Seepage	0.53
				Slope	0.32

Table 13.—Sanitary Facilities, Part I—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
WaC:					
Waynesboro----------	93	Somewhat limited		Very limited	
		Slow water movement	0.46	Slope	1.00
		Slope	0.04	Seepage	0.53
WaD:					
Waynesboro----------	97	Very limited		Very limited	
		Too steep	1.00	Slope	1.00
		Slow water movement	0.46	Seepage	0.53
WeD:					
Waynesboro----------	45	Somewhat limited		Very limited	
		Slope	0.63	Slope	1.00
		Slow water movement	0.46	Seepage	0.53
Etowah--------------	35	Somewhat limited		Very limited	
		Slope	0.63	Slope	1.00
		Slow water movement	0.46	Seepage	0.53
Urban land----------	20	Not rated		Not rated	
WhB:					
Whitwell-----------	94	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.46	Seepage	0.53

Table 13.—Sanitary Facilities, Part II

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
AeC:							
Allen---------------	95	Somewhat limited		Somewhat limited		Somewhat limited	
		Too clayey	0.50	Slope	0.04	Too clayey	0.50
		Slope	0.04			Slope	0.04
AeD:							
Allen---------------	95	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Too clayey	0.50			Too clayey	0.50
AfD:							
Allen---------------	43	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Too clayey	0.50			Too clayey	0.50
Jefferson-----------	32	Very limited		Very limited		Somewhat limited	
		Depth to bedrock	1.00	Seepage	1.00	Slope	0.63
		Seepage, bottom layer	1.00	Slope	0.63	Too clayey	0.50
		Slope	0.63				
		Too clayey	0.50				
Urban land----------	25	Not rated		Not rated		Not rated	
AmC:							
Armuchee------------	94	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too clayey	1.00	Slope	0.04	Too clayey	1.00
		Slope	0.04			Gravel content	0.57
						Slope	0.04
AmD:							
Armuchee------------	92	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too clayey	1.00	Too steep	1.00	Too clayey	1.00
		Too steep	1.00			Too steep	1.00
						Gravel content	0.57
AmE:							
Armuchee------------	97	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Too steep	1.00
		Too clayey	1.00			Too clayey	1.00
						Gravel content	0.57
ANS:							
Area not surveyed---	100	Not rated		Not rated		Not rated	
ApC:							
Apison--------------	73	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too clayey	0.50	Slope	0.04	Too clayey	0.50
		Slope	0.04			Slope	0.04

Table 13.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
ApC:							
Sunlight	27	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	0.04	Slope	0.04	Gravel content	0.99
						Slope	0.04
ApF:							
Apison	50	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too clayey	0.50			Too clayey	0.50
Sunlight	44	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Too steep	1.00
						Gravel content	0.99
ASD:							
Ash disposal area	100	Not rated		Not rated		Not rated	
BeF:							
Bethesda	80	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Too clayey	0.50			Too clayey	0.50
						Gravel content	0.20
Mines pit	20	Not rated		Not rated		Not rated	
Bg:							
Bloomingdale	95	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	1.00
		Too clayey	1.00			Hard to compact	1.00
BrE:							
Bradyville	61	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Too steep	1.00	Too clayey	1.00
		Too clayey	1.00	Depth to bedrock	0.88	Hard to compact	1.00
		Too steep	1.00			Too steep	1.00
						Depth to bedrock	0.88
Rock outcrop	39	Not rated		Not rated		Not rated	
CaB:							
Capshaw	88	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	1.00
		Depth to bedrock	1.00			Hard to compact	1.00
		Too clayey	1.00			Depth to saturated zone	0.24
CbD:							
Colbert	36	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	1.00
		Depth to bedrock	1.00	Too steep	1.00	Hard to compact	1.00
		Too clayey	1.00	Depth to bedrock	0.01	Too steep	1.00
		Too steep	1.00			Depth to bedrock	0.01

Table 13.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
CbD:							
Lyerly	34	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Too clayey	1.00
		Too clayey	1.00	Too steep	1.00	Hard to compact	1.00
		Too steep	1.00			Depth to bedrock	1.00
						Too steep	1.00
Rock outcrop	23	Not rated		Not rated		Not rated	
CoC:							
Collegedale	97	Very limited		Somewhat limited		Very limited	
		Too clayey	1.00	Slope	0.04	Too clayey	1.00
		Slope	0.04			Hard to compact	1.00
						Slope	0.04
CoD:							
Collegedale	85	Very limited		Very limited		Very limited	
		Too clayey	1.00	Too steep	1.00	Too clayey	1.00
		Too steep	1.00			Hard to compact	1.00
						Too steep	1.00
DeB:							
Dewey	90	Somewhat limited		Not limited		Somewhat limited	
		Too clayey	0.50			Too clayey	0.50
						Hard to compact	0.50
DeC:							
Dewey	93	Somewhat limited		Somewhat limited		Somewhat limited	
		Too clayey	0.50	Slope	0.04	Too clayey	0.50
		Slope	0.04			Hard to compact	0.50
						Slope	0.04
DeD:							
Dewey	93	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Too clayey	0.50			Too clayey	0.50
						Hard to compact	0.50
DeE:							
Dewey	90	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Too clayey	0.50			Too clayey	0.50
						Hard to compact	0.50
EcB:							
Ealy	60	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Seepage	0.52
		Seepage, bottom layer	1.00	Seepage	1.00		
		Flooding	0.40	Flooding	0.40		
Craigsville	40	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Too sandy	0.50
		Too sandy	0.50	Flooding	0.40	Large stones	0.45
		Large stones	0.45			Gravel content	0.33
		Flooding	0.40				

Table 13.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
EtB:							
Etowah	92	Somewhat limited		Not limited		Somewhat limited	
		Too clayey	0.50			Too clayey	0.50
EtC:							
Etowah	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Too clayey	0.50	Slope	0.04	Too clayey	0.50
		Slope	0.04			Slope	0.04
FuB:							
Fullerton	69	Somewhat limited		Not limited		Somewhat limited	
		Too clayey	0.50			Too clayey	0.50
						Hard to compact	0.50
						Gravel content	0.27
Pailo	25	Very limited		Very limited		Somewhat limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Gravel content	0.84
						Seepage	0.52
		Too clayey	1.00			Too clayey	0.50
FuC:							
Fullerton	68	Somewhat limited		Somewhat limited		Somewhat limited	
		Too clayey	0.50	Slope	0.04	Too clayey	0.50
		Slope	0.04			Hard to compact	0.50
						Gravel content	0.27
						Slope	0.04
Pailo	20	Very limited		Very limited		Somewhat limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Gravel content	0.84
				Slope	0.04	Seepage	0.52
		Too clayey	1.00			Too clayey	0.50
		Slope	0.04			Slope	0.04
FuD:							
Fullerton	67	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Too clayey	0.50			Too clayey	0.50
						Hard to compact	0.50
						Gravel content	0.27
Pailo	26	Very limited		Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Too steep	1.00
				Too steep	1.00	Gravel content	0.84
		Too clayey	1.00			Seepage	0.52
		Too steep	1.00			Too clayey	0.50
FuE:							
Fullerton	67	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Too clayey	0.50			Too clayey	0.50
						Hard to compact	0.50
						Gravel content	0.27
Pailo	30	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Gravel content	0.84
						Seepage	0.52
		Too clayey	1.00			Too clayey	0.50

Table 13.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
FwD:							
Fullerton	45	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Too clayey	0.50			Too clayey	0.50
						Hard to compact	0.50
						Gravel content	0.27
Dewey	35	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Too clayey	0.50			Too clayey	0.50
						Hard to compact	0.50
Urban land	20	Not rated		Not rated		Not rated	
FwE:							
Fullerton	45	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Too clayey	0.50			Too clayey	0.50
						Hard to compact	0.50
						Gravel content	0.27
Dewey	35	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Too clayey	0.50			Too clayey	0.50
						Hard to compact	0.50
Urban land	20	Not rated		Not rated		Not rated	
GnD:							
Gilpin	94	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Too clayey	0.50			Too clayey	0.50
GpE:							
Gilpin	57	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too clayey	0.50			Too clayey	0.50
Petros	39	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Too steep	1.00
		Seepage, bottom layer	1.00			Gravel content	1.00
						Seepage	0.22
GpF:							
Gilpin	63	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too clayey	0.50			Too clayey	0.50
Petros	30	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Too steep	1.00
		Seepage, bottom layer	1.00			Gravel content	1.00
						Seepage	0.22

Table 13.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
GsF:							
Gilpin	37	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too clayey	0.50			Too clayey	0.50
Bouldin	36	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Large stones	0.97
		Large stones	0.97			Seepage	0.52
		Too clayey	0.50			Too clayey	0.50
						Gravel content	0.01
Petros	23	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Too steep	1.00
		Seepage, bottom layer	1.00			Gravel content	1.00
						Seepage	0.22
Ha:							
Hamblen	90	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	0.47
		Depth to saturated zone	1.00	Depth to saturated zone	1.00		
HeB:							
Hendon	96	Somewhat limited		Not limited		Somewhat limited	
		Too clayey	0.50			Too clayey	0.50
HeC:							
Hendon	97	Somewhat limited		Not limited		Somewhat limited	
		Too clayey	0.50			Too clayey	0.50
JeC:							
Jefferson	95	Very limited		Very limited		Somewhat limited	
		Depth to bedrock	1.00	Seepage	1.00	Too clayey	0.50
		Seepage, bottom layer	1.00				
		Too clayey	0.50				
JeE:							
Jefferson	83	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Too steep	1.00	Too steep	1.00
		Too steep	1.00	Seepage	1.00	Too clayey	0.50
		Seepage, bottom layer	1.00				
		Too clayey	0.50				
JnD:							
Jefferson	95	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Seepage	1.00	Too steep	1.00
		Too steep	1.00	Too steep	1.00	Seepage	0.52
		Seepage, bottom layer	1.00			Large stones	0.02
		Large stones	0.02				

Table 13.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
JnF:							
Jefferson-----------	95	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Depth to bedrock	1.00	Seepage	1.00	Seepage	0.52
		Seepage, bottom layer	1.00			Large stones	0.02
		Large stones	0.02				
LbB:							
Lily----------------	86	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Seepage	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Depth to bedrock	1.00	Seepage	0.52
LbC:							
Lily----------------	94	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Seepage	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Depth to bedrock	1.00	Seepage	0.52
		Slope	0.04	Slope	0.04	Slope	0.04
LbD:							
Lily----------------	88	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Seepage	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Depth to bedrock	1.00	Too steep	1.00
		Too steep	1.00	Too steep	1.00	Seepage	0.52
LgD:							
Lily----------------	47	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Seepage	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Depth to bedrock	1.00	Too steep	1.00
		Too steep	1.00	Too steep	1.00	Seepage	0.52
Gilpin--------------	39	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Too clayey	0.50			Too clayey	0.50
LgE:							
Lily----------------	52	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Depth to bedrock	1.00	Seepage	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Depth to bedrock	1.00	Seepage	0.52
Gilpin--------------	36	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too clayey	0.50			Too clayey	0.50
LmD:							
Lily----------------	54	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Seepage	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Depth to bedrock	1.00	Too steep	1.00
		Too steep	1.00	Too steep	1.00	Seepage	0.52

Table 13.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
LmD:							
Ramsey	38	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Too steep	1.00	Too steep	1.00
		Too steep	1.00			Seepage	0.52
LmE:							
Lily	52	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Depth to bedrock	1.00	Seepage	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Depth to bedrock	1.00	Seepage	0.52
Ramsey	42	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Too steep	1.00
		Seepage, bottom layer	1.00			Seepage	0.52
LoB:							
Lonewood	90	Very limited		Somewhat limited		Somewhat limited	
		Depth to bedrock	1.00	Depth to bedrock	0.08	Too clayey	0.50
		Too clayey	0.50			Depth to bedrock	0.08
LoC:							
Lonewood	84	Very limited		Somewhat limited		Somewhat limited	
		Depth to bedrock	1.00	Depth to bedrock	0.08	Too clayey	0.50
		Too clayey	0.50	Slope	0.04	Depth to bedrock	0.08
		Slope	0.04			Slope	0.04
LP:							
Limestone quarry	100	Not rated		Not rated		Not rated	
Me:							
Melvin	95	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00		
MnC:							
Minvale	95	Very limited		Somewhat limited		Somewhat limited	
		Seepage, bottom layer	1.00	Slope	0.04	Too clayey	0.50
		Too clayey	0.50			Gravel content	0.05
		Slope	0.04			Slope	0.04
MoC:							
Montevallo	95	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	0.04	Slope	0.04	Gravel content	1.00
						Slope	0.04
MoD:							
Montevallo	93	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too steep	1.00	Too steep	1.00	Gravel content	1.00
						Too steep	1.00

Table 13.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
MoE:							
Montevallo	93	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Too steep	1.00
						Gravel content	1.00
Pp:							
Pope	50	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Flooding	1.00	Seepage	0.22
		Seepage, bottom layer	1.00	Seepage	1.00		
Philo	45	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	0.68
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Seepage	0.52
		Seepage, bottom layer	1.00				
RaD:							
Ramsey	75	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Too steep	1.00	Too steep	1.00
		Too steep	1.00			Seepage	0.52
Rock outcrop	20	Not rated		Not rated		Not rated	
RaF:							
Ramsey	70	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Too steep	1.00
		Seepage, bottom layer	1.00			Seepage	0.52
Rock outcrop	30	Not rated		Not rated		Not rated	
Sd:							
Shady	96	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Flooding	1.00	Too clayey	0.50
		Depth to saturated zone	1.00	Depth to saturated zone	1.00		
		Seepage, bottom layer	1.00	Seepage	1.00		
		Too clayey	0.50				
SfB:							
Shady	40	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	0.50
		Seepage, bottom layer	1.00	Seepage	1.00		
		Too clayey	0.50				
Swafford	35	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	0.50
		Too clayey	0.50			Depth to saturated zone	0.47
Urban land	25	Not rated		Not rated		Not rated	

Table 13.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
ShD:							
Shelocta------------	97	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Too clayey	0.50	Seepage	1.00	Too clayey	0.50
						Seepage	0.22
SwB:							
Swafford------------	94	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	0.50
		Too clayey	0.50			Depth to saturated zone	0.47
TaB:							
Tasso---------------	94	Somewhat limited		Not limited		Somewhat limited	
		Too clayey	0.50			Too clayey	0.50
TaC:							
Tasso---------------	92	Somewhat limited		Somewhat limited		Somewhat limited	
		Too clayey	0.50	Slope	0.04	Too clayey	0.50
		Slope	0.04			Slope	0.04
TeB2:							
Townley-------------	71	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Too clayey	1.00
		Too clayey	1.00			Hard to compact	1.00
						Depth to bedrock	1.00
Coile---------------	21	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too clayey	1.00			Too clayey	1.00
						Hard to compact	1.00
						Gravel content	0.91
TeC:							
Townley-------------	96	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too clayey	0.50	Slope	0.01	Too clayey	0.50
		Slope	0.01			Slope	0.01
TeD:							
Townley-------------	90	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Too clayey	0.50			Too clayey	0.50
TeE:							
Townley-------------	92	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too clayey	0.50			Too clayey	0.50
TuD:							
Townley-------------	45	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Too clayey	0.50			Too clayey	0.50

Table 13.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
TuD:							
Armuchee	35	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too clayey	1.00	Too steep	1.00	Too clayey	1.00
		Too steep	1.00			Too steep	1.00
						Gravel content	0.57
Urban land	20	Not rated		Not rated		Not rated	
TuE:							
Townley	45	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too clayey	0.50			Too clayey	0.50
Armuchee	35	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Too steep	1.00
		Too clayey	1.00			Too clayey	1.00
						Gravel content	0.57
Urban land	20	Not rated		Not rated		Not rated	
UrD:							
Urban land	100	Not rated		Not rated		Not rated	
W:							
Water	100	Not rated		Not rated		Not rated	
WaB:							
Waynesboro	93	Somewhat limited		Not limited		Somewhat limited	
		Too clayey	0.50			Hard to compact	0.50
						Too clayey	0.50
WaC:							
Waynesboro	93	Somewhat limited		Somewhat limited		Somewhat limited	
		Too clayey	0.50	Slope	0.04	Hard to compact	0.50
		Slope	0.04			Too clayey	0.50
						Slope	0.04
WaD:							
Waynesboro	97	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Too clayey	0.50			Hard to compact	0.50
						Too clayey	0.50
WeD:							
Waynesboro	45	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.63	Slope	0.63	Slope	0.63
		Too clayey	0.50			Hard to compact	0.50
						Too clayey	0.50
Etowah	35	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.63	Slope	0.63	Slope	0.63
		Too clayey	0.50			Too clayey	0.50
Urban land	20	Not rated		Not rated		Not rated	

Table 13.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
WhB:							
Whitwell------------	94	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Flooding	1.00	Too clayey	0.50
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.47

Table 14.—Construction Materials, Part I

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The ratings given for the thickest layer are for the thickest layer above and excluding the bottom layer. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
AeC:					
Allen---------------	95	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
AeD:					
Allen---------------	95	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
AfD:					
Allen---------------	43	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Jefferson-----------	32	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Urban land----------	25	Not rated		Not rated	
AmC:					
Armuchee------------	94	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
AmD:					
Armuchee------------	92	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
AmE:					
Armuchee------------	97	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
ANS:					
Area not surveyed---	100	Not rated		Not rated	
ApC:					
Apison--------------	73	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Sunlight------------	27	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 14.—Construction Materials, Part I—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
ApF:					
Apison	50	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Sunlight	44	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
ASD:					
Ash disposal area	100	Not rated		Not rated	
BeF:					
Bethesda	80	Fair		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.07	Thickest layer	0.00
Mines pit	20	Not rated		Not rated	
Bg:					
Bloomingdale	95	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
BrE:					
Bradyville	61	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Rock outcrop	39	Not rated		Not rated	
CaB:					
Capshaw	88	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
CbD:					
Colbert	36	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Lyerly	34	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Rock outcrop	23	Not rated		Not rated	
CoC:					
Collegedale	97	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
CoD:					
Collegedale	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
DeB:					
Dewey	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 14.—Construction Materials, Part I—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
DeC:					
Dewey	93	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
DeD:					
Dewey	93	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
DeE:					
Dewey	90	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
EcB:					
Ealy	60	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.01
Craigsville	40	Poor		Poor	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.00
EtB:					
Etowah	92	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
EtC:					
Etowah	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
FuB:					
Fullerton	69	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Pailo	25	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
FuC:					
Fullerton	68	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Pailo	20	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
FuD:					
Fullerton	67	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Pailo	26	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 14.—Construction Materials, Part I—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
FuE:					
Fullerton-----------	67	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Pailo---------------	30	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
FwD:					
Fullerton-----------	45	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Dewey---------------	35	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Urban land----------	20	Not rated		Not rated	
FwE:					
Fullerton-----------	45	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Dewey---------------	35	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Urban land----------	20	Not rated		Not rated	
GnD:					
Gilpin--------------	94	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
GpE:					
Gilpin--------------	57	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Petros--------------	39	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.18	Thickest layer	0.00
GpF:					
Gilpin--------------	63	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Petros--------------	30	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.18	Thickest layer	0.00
GsF:					
Gilpin--------------	37	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00

Table 14.—Construction Materials, Part I—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel: Rating class	Value	Potential source of sand: Rating class	Value
GsF:					
Bouldin	36	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Petros	23	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.18	Thickest layer	0.00
Ha:					
Hamblen	90	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
HeB:					
Hendon	96	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
HeC:					
Hendon	97	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
JeC:					
Jefferson	95	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
JeE:					
Jefferson	83	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
JnD:					
Jefferson	95	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
JnF:					
Jefferson	95	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
LbB:					
Lily	86	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
LbC:					
Lily	94	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
LbD:					
Lily	88	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 14.—Construction Materials, Part I—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
LgD:					
Lily----------------	47	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Gilpin--------------	39	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
LgE:					
Lily----------------	52	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Gilpin--------------	36	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
LmD:					
Lily----------------	54	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Ramsey--------------	38	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.04
LmE:					
Lily----------------	52	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Ramsey--------------	42	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.04
LoB:					
Lonewood------------	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
LoC:					
Lonewood------------	84	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
LP:					
Limestone quarry----	100	Not rated		Not rated	
Me:					
Melvin--------------	95	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
MnC:					
Minvale-------------	95	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00

Table 14.—Construction Materials, Part I—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
MoC:					
Montevallo----------	95	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
MoD:					
Montevallo----------	93	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
MoE:					
Montevallo----------	93	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Pp:					
Pope----------------	50	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.04
Philo---------------	45	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.02
RaD:					
Ramsey--------------	75	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.04
Rock outcrop--------	20	Not rated		Not rated	
RaF:					
Ramsey--------------	70	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.04
Rock outcrop--------	30	Not rated		Not rated	
Sd:					
Shady---------------	96	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
SfB:					
Shady---------------	40	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Swafford------------	35	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Urban land----------	25	Not rated		Not rated	
ShD:					
Shelocta------------	97	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00

Table 14.—Construction Materials, Part I—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel: Rating class	Value	Potential source of sand: Rating class	Value
SwB:					
Swafford------------	94	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
TaB:					
Tasso---------------	94	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
TaC:					
Tasso---------------	92	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
TeB2:					
Townley-------------	71	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Coile---------------	21	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
TeC:					
Townley-------------	96	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
TeD:					
Townley-------------	90	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
TeE:					
Townley-------------	92	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
TuD:					
Townley-------------	45	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Armuchee------------	35	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Urban land----------	20	Not rated		Not rated	
TuE:					
Townley-------------	45	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Armuchee------------	35	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Urban land----------	20	Not rated		Not rated	

Table 14.—Construction Materials, Part I—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel: Rating class	Value	Potential source of sand: Rating class	Value
UrD:					
Urban land----------	100	Not rated		Not rated	
W:					
Water---------------	100	Not rated		Not rated	
WaB:					
Waynesboro----------	93	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
WaC:					
Waynesboro----------	93	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
WaD:					
Waynesboro----------	97	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
WeD:					
Waynesboro----------	45	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Etowah--------------	35	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Urban land----------	20	Not rated		Not rated	
WhB:					
Whitwell------------	94	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00

Table 14.—Construction Materials, Part II

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99. The smaller the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
AeC:							
Allen	95	Fair		Poor		Fair	
		Organic matter content low	0.12	Low strength	0.00	Hard to reclaim (rock fragments)	0.88
		Too acid	0.50			Too acid	0.88
						Slope	0.96
						Rock fragments	0.98
AeD:							
Allen	95	Fair		Poor		Poor	
		Organic matter content low	0.12	Low strength	0.00	Slope	0.00
		Too acid	0.50			Hard to reclaim (rock fragments)	0.88
						Too acid	0.88
						Rock fragments	0.98
AfD:							
Allen	43	Fair		Poor		Poor	
		Organic matter content low	0.12	Low strength	0.00	Slope	0.00
		Too acid	0.50			Hard to reclaim (rock fragments)	0.88
						Too acid	0.88
						Rock fragments	0.98
Jefferson	32	Fair		Poor		Fair	
		Too acid	0.08	Low strength	0.00	Slope	0.37
		Organic matter content low	0.12			Too acid	0.88
						Rock fragments	0.88
						Hard to reclaim (rock fragments)	0.99
Urban land	25	Not rated		Not rated		Not rated	
AmC:							
Armuchee	94	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Too clayey	0.00	Low strength	0.78	Too clayey	0.00
		Depth to bedrock	0.01	Shrink-swell	0.87	Depth to bedrock	0.01
		Organic matter content low	0.12			Too acid	0.88
		Too acid	0.50			Slope	0.96
		Water erosion	0.99				
AmD:							
Armuchee	92	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Too clayey	0.00	Low strength	0.78	Too clayey	0.00
		Depth to bedrock	0.01	Shrink-swell	0.87	Slope	0.00
		Organic matter content low	0.12	Slope	0.98	Depth to bedrock	0.01
		Too acid	0.50			Too acid	0.88
		Water erosion	0.99				

Table 14.—Construction Materials, Part II—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
AmE:							
Armuchee	97	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Too clayey	0.00	Slope	0.00	Rock fragments	0.00
		Depth to bedrock	0.01	Low strength	0.78	Too clayey	0.00
		Organic matter content low	0.12	Shrink-swell	0.87	Depth to bedrock	0.01
						Too acid	0.88
		Too acid	0.50				
		Water erosion	0.99				
ANS:							
Area not surveyed	100	Not rated		Not rated		Not rated	
ApC:							
Apison	73	Fair		Poor		Fair	
		Depth to bedrock	0.03	Depth to bedrock	0.00	Depth to bedrock	0.03
		Droughty	0.09			Rock fragments	0.50
		Organic matter content low	0.12			Too acid	0.88
						Slope	0.96
		Too acid	0.50				
		Water erosion	0.99				
Sunlight	27	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Depth to bedrock	0.00			Depth to bedrock	0.00
		Organic matter content low	0.12			Too acid	0.88
						Slope	0.96
		Too acid	0.50				
ApF:							
Apison	50	Fair		Poor		Poor	
		Depth to bedrock	0.03	Slope	0.00	Slope	0.00
		Droughty	0.09	Depth to bedrock	0.00	Depth to bedrock	0.03
		Organic matter content low	0.12			Rock fragments	0.50
						Too acid	0.88
		Too acid	0.50				
		Water erosion	0.99				
Sunlight	44	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Rock fragments	0.00
		Organic matter content low	0.12			Depth to bedrock	0.00
						Too acid	0.88
		Too acid	0.50				
ASD:							
Ash disposal area	100	Not rated		Not rated		Not rated	
BeF:							
Bethesda	80	Fair		Poor		Poor	
		Organic matter content low	0.02	Slope	0.00	Slope	0.00
						Hard to reclaim (rock fragments)	0.02
		Too acid	0.12				
		Droughty	0.97			Rock fragments	0.08
						Too acid	0.59
Mines pit	20	Not rated		Not rated		Not rated	

Table 14.—Construction Materials, Part II—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
Bg:							
Bloomingdale	95	Poor		Poor		Poor	
		Too clayey	0.00	Wetness depth	0.00	Wetness depth	0.00
		Organic matter content low	0.88	Low strength	0.00	Too clayey	0.00
				Shrink-swell	0.87		
		Too acid	0.92				
		Water erosion	0.99				
BrE:							
Bradyville	61	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Organic matter content low	0.12	Depth to bedrock	0.12	Slope	0.00
				Shrink-swell	0.87	Rock fragments	0.88
		Too acid	0.54				
		Droughty	0.97				
Rock outcrop	39	Not rated		Not rated		Not rated	
CaB:							
Capshaw	88	Fair		Poor		Fair	
		Organic matter content low	0.12	Low strength	0.00	Too clayey	0.29
				Shrink-swell	0.98	Rock fragments	0.76
		Too clayey	0.50	Wetness depth	0.98	Wetness depth	0.98
		Too acid	0.92				
		Water erosion	0.99				
CbD:							
Colbert	36	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Organic matter content low	0.12	Shrink-swell	0.12	Slope	0.00
				Slope	0.82		
		Too acid	0.68	Depth to bedrock	0.99		
		Water erosion	0.99				
Lyerly	34	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Organic matter content low	0.12	Depth to bedrock	0.00	Slope	0.00
				Shrink-swell	0.12	Depth to bedrock	0.99
		Water erosion	0.90	Slope	0.82		
		Too acid	0.92				
		Droughty	0.96				
		Depth to bedrock	0.99				
Rock outcrop	23	Not rated		Not rated		Not rated	
CoC:							
Collegedale	97	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Organic matter content low	0.12	Shrink-swell	0.87	Too acid	0.50
						Slope	0.96
		Too acid	0.50			Rock fragments	0.98
		Water erosion	0.99				
CoD:							
Collegedale	85	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Organic matter content low	0.12	Shrink-swell	0.87	Slope	0.00
				Slope	0.98	Too acid	0.50
		Too acid	0.50			Rock fragments	0.98
		Water erosion	0.99				

Table 14.—Construction Materials, Part II—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
DeB:							
Dewey	90	Fair		Fair		Fair	
		Too clayey	0.02	Low strength	0.10	Too clayey	0.01
		Organic matter content low	0.12	Shrink-swell	0.87		
		Too acid	0.50				
DeC:							
Dewey	93	Fair		Fair		Fair	
		Too clayey	0.02	Low strength	0.10	Too clayey	0.01
		Organic matter content low	0.12	Shrink-swell	0.87	Slope	0.96
		Too acid	0.50				
DeD:							
Dewey	93	Fair		Fair		Poor	
		Too clayey	0.02	Low strength	0.10	Slope	0.00
		Organic matter content low	0.12	Shrink-swell	0.87	Too clayey	0.01
				Slope	0.98		
		Too acid	0.50				
DeE:							
Dewey	90	Fair		Poor		Poor	
		Too clayey	0.02	Slope	0.00	Slope	0.00
		Organic matter content low	0.12	Low strength	0.10	Too clayey	0.01
				Shrink-swell	0.87		
		Too acid	0.50				
EcB:							
Ealy	60	Fair		Good		Fair	
		Too acid	0.50			Too acid	0.88
		Organic matter content low	0.88				
Craigsville	40	Fair		Poor		Poor	
		Too sandy	0.04	Cobble content	0.00	Rock fragments	0.00
		Organic matter content low	0.12			Hard to reclaim (rock fragments)	0.00
		Too acid	0.50			Too sandy	0.04
		Cobble content	0.55			Too acid	0.88
		Droughty	0.82				
EtB:							
Etowah	92	Fair		Poor		Fair	
		Organic matter content low	0.12	Low strength	0.00	Too acid	0.88
		Too acid	0.50				
		Water erosion	0.99				
EtC:							
Etowah	90	Fair		Poor		Fair	
		Organic matter content low	0.12	Low strength	0.00	Too acid	0.88
						Slope	0.96
		Too acid	0.50				
		Water erosion	0.99				

Table 14.—Construction Materials, Part II—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
FuB:							
Fullerton-----------	69	Poor		Fair		Poor	
		Too clayey	0.00	Low strength	0.10	Too clayey	0.00
		Organic matter content low	0.12	Shrink-swell	0.87	Rock fragments	0.00
						Hard to reclaim (rock fragments)	0.61
		Too acid	0.50				
						Too acid	0.88
Pailo---------------	25	Fair		Fair		Poor	
		Organic matter content low	0.02	Low strength	0.22	Rock fragments	0.00
						Too acid	0.50
		Too acid	0.08			Hard to reclaim (rock fragments)	0.61
FuC:							
Fullerton-----------	68	Poor		Fair		Poor	
		Too clayey	0.00	Low strength	0.10	Too clayey	0.00
		Organic matter content low	0.12	Shrink-swell	0.87	Rock fragments	0.00
						Hard to reclaim (rock fragments)	0.61
		Too acid	0.50				
						Too acid	0.88
						Slope	0.96
Pailo---------------	20	Fair		Fair		Poor	
		Organic matter content low	0.02	Low strength	0.22	Rock fragments	0.00
						Too acid	0.50
		Too acid	0.08			Hard to reclaim (rock fragments)	0.61
						Slope	0.96
FuD:							
Fullerton-----------	67	Poor		Fair		Poor	
		Too clayey	0.00	Low strength	0.10	Too clayey	0.00
		Organic matter content low	0.12	Shrink-swell	0.87	Rock fragments	0.00
				Slope	0.98	Slope	0.00
		Too acid	0.50			Hard to reclaim (rock fragments)	0.61
						Too acid	0.88
Pailo---------------	26	Fair		Fair		Poor	
		Organic matter content low	0.02	Low strength	0.22	Rock fragments	0.00
				Slope	0.98	Slope	0.00
		Too acid	0.08			Too acid	0.50
						Hard to reclaim (rock fragments)	0.61
FuE:							
Fullerton-----------	67	Poor		Poor		Poor	
		Too clayey	0.00	Slope	0.00	Slope	0.00
		Organic matter content low	0.12	Low strength	0.10	Too clayey	0.00
				Shrink-swell	0.87	Rock fragments	0.00
		Too acid	0.50			Hard to reclaim (rock fragments)	0.61
						Too acid	0.88
Pailo---------------	30	Fair		Poor		Poor	
		Organic matter content low	0.02	Slope	0.00	Slope	0.00
				Low strength	0.22	Rock fragments	0.00
		Too acid	0.08			Too acid	0.50
						Hard to reclaim (rock fragments)	0.61

Table 14.—Construction Materials, Part II—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
FwD:							
Fullerton	45	Poor		Fair		Poor	
		Too clayey	0.00	Low strength	0.10	Too clayey	0.00
		Organic matter content low	0.12	Shrink-swell	0.87	Rock fragments	0.00
		Too acid	0.50	Slope	0.98	Slope	0.00
						Hard to reclaim (rock fragments)	0.61
						Too acid	0.88
Dewey	35	Fair		Fair		Poor	
		Too clayey	0.02	Low strength	0.10	Slope	0.00
		Organic matter content low	0.12	Shrink-swell	0.87	Too clayey	0.01
		Too acid	0.50	Slope	0.98		
Urban land	20	Not rated		Not rated		Not rated	
FwE:							
Fullerton	45	Poor		Poor		Poor	
		Too clayey	0.00	Slope	0.00	Slope	0.00
		Organic matter content low	0.12	Low strength	0.10	Too clayey	0.00
		Too acid	0.50	Shrink-swell	0.87	Rock fragments	0.00
						Hard to reclaim (rock fragments)	0.61
						Too acid	0.88
Dewey	35	Fair		Poor		Poor	
		Too clayey	0.02	Slope	0.00	Slope	0.00
		Organic matter content low	0.12	Low strength	0.10	Too clayey	0.01
		Too acid	0.50	Shrink-swell	0.87		
Urban land	20	Not rated		Not rated		Not rated	
GnD:							
Gilpin	94	Fair		Poor		Poor	
		Droughty	0.14	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.16	Low strength	0.00	Depth to bedrock	0.16
		Too acid	0.50	Slope	0.98	Too acid	0.50
		Organic matter content low	0.88			Too clayey	0.70
		Too clayey	0.98			Rock fragments	0.92
GpE:							
Gilpin	57	Fair		Poor		Poor	
		Droughty	0.14	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.16	Slope	0.00	Depth to bedrock	0.16
		Too acid	0.50	Low strength	0.00	Too acid	0.50
		Organic matter content low	0.88			Too clayey	0.70
		Too clayey	0.98			Rock fragments	0.92
Petros	39	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Rock fragments	0.00
		Organic matter content low	0.12			Depth to bedrock	0.00
		Too acid	0.50			Too acid	0.88

Table 14.—Construction Materials, Part II—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
GpF:							
Gilpin	63	Fair		Poor		Poor	
		Droughty	0.14	Slope	0.00	Slope	0.00
		Depth to bedrock	0.16	Depth to bedrock	0.00	Depth to bedrock	0.16
		Too acid	0.50	Low strength	0.00	Too acid	0.50
		Organic matter content low	0.88			Too clayey	0.70
						Rock fragments	0.92
		Too clayey	0.98				
Petros	30	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Rock fragments	0.00
		Organic matter content low	0.12			Depth to bedrock	0.00
						Too acid	0.88
		Too acid	0.50				
GsF:							
Gilpin	37	Fair		Poor		Poor	
		Droughty	0.14	Slope	0.00	Slope	0.00
		Depth to bedrock	0.16	Depth to bedrock	0.00	Depth to bedrock	0.16
		Too acid	0.50	Low strength	0.00	Too acid	0.50
		Organic matter content low	0.88			Too clayey	0.70
						Rock fragments	0.92
		Too clayey	0.98				
Bouldin	36	Poor		Poor		Poor	
		Stone content	0.00	Slope	0.00	Slope	0.00
		Organic matter content low	0.12	Stones	0.01	Hard to reclaim (rock fragments)	0.00
		Too acid	0.50			Rock fragments	0.00
						Too acid	0.88
Petros	23	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Rock fragments	0.00
		Organic matter content low	0.12			Depth to bedrock	0.00
						Too acid	0.88
		Too acid	0.50				
Ha:							
Hamblen	90	Fair		Fair		Fair	
		Organic matter content low	0.50	Low strength	0.22	Wetness depth	0.89
				Wetness depth	0.89		
		Too acid	0.92				
HeB:							
Hendon	96	Fair		Poor		Fair	
		Organic matter content low	0.12	Low strength	0.00	Too clayey	0.29
						Too acid	0.50
		Too acid	0.50				
		Too clayey	0.50				
		Water erosion	0.99				
HeC:							
Hendon	97	Fair		Poor		Fair	
		Organic matter content low	0.12	Low strength	0.00	Too clayey	0.29
						Too acid	0.50
		Too acid	0.50				
		Too clayey	0.50				
		Water erosion	0.99				

Table 14.—Construction Materials, Part II—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
JeC:							
Jefferson-----------	95	Fair		Poor		Fair	
		Too acid	0.08	Low strength	0.00	Too acid	0.88
		Organic matter content low	0.12			Rock fragments	0.88
						Hard to reclaim (rock fragments)	0.99
JeE:							
Jefferson-----------	83	Fair		Poor		Poor	
		Too acid	0.08	Low strength	0.00	Slope	0.00
		Organic matter content low	0.12	Slope	0.02	Too acid	0.88
						Rock fragments	0.88
						Hard to reclaim (rock fragments)	0.99
JnD:							
Jefferson-----------	95	Fair		Fair		Poor	
		Organic matter content low	0.12	Cobble content	0.79	Hard to reclaim (rock fragments)	0.00
		Too acid	0.32	Slope	0.98	Slope	0.00
						Rock fragments	0.06
						Too acid	0.88
JnF:							
Jefferson-----------	95	Fair		Poor		Poor	
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
		Too acid	0.32	Cobble content	0.79	Hard to reclaim (rock fragments)	0.00
						Rock fragments	0.06
						Too acid	0.88
LbB:							
Lily----------------	86	Fair		Poor		Fair	
		Organic matter content low	0.12	Depth to bedrock	0.00	Too acid	0.50
		Too acid	0.50			Depth to bedrock	0.54
		Depth to bedrock	0.54				
		Droughty	0.56				
LbC:							
Lily----------------	94	Fair		Poor		Fair	
		Organic matter content low	0.12	Depth to bedrock	0.00	Too acid	0.50
		Too acid	0.50			Depth to bedrock	0.54
		Depth to bedrock	0.54			Slope	0.96
		Droughty	0.56				
LbD:							
Lily----------------	88	Fair		Poor		Poor	
		Organic matter content low	0.12	Depth to bedrock	0.00	Slope	0.00
		Too acid	0.50	Slope	0.98	Too acid	0.50
		Depth to bedrock	0.54			Depth to bedrock	0.54
		Droughty	0.56				

Table 14.—Construction Materials, Part II—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
LgD:							
Lily	47	Fair		Poor		Poor	
		Organic matter content low	0.12	Depth to bedrock	0.00	Slope	0.00
		Too acid	0.50	Slope	0.98	Too acid	0.50
		Depth to bedrock	0.54			Depth to bedrock	0.54
		Droughty	0.56				
Gilpin	39	Fair		Poor		Poor	
		Droughty	0.14	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.16	Low strength	0.00	Depth to bedrock	0.16
		Too acid	0.50	Slope	0.98	Too acid	0.50
		Organic matter content low	0.88			Too clayey	0.70
		Too clayey	0.98			Rock fragments	0.92
LgE:							
Lily	52	Fair		Poor		Poor	
		Organic matter content low	0.12	Depth to bedrock	0.00	Slope	0.00
		Too acid	0.50	Slope	0.00	Too acid	0.50
		Depth to bedrock	0.54			Depth to bedrock	0.54
		Droughty	0.56				
Gilpin	36	Fair		Poor		Poor	
		Droughty	0.14	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.16	Slope	0.00	Depth to bedrock	0.16
		Too acid	0.50	Low strength	0.00	Too acid	0.50
		Organic matter content low	0.88			Too clayey	0.70
		Too clayey	0.98			Rock fragments	0.92
LmD:							
Lily	54	Fair		Poor		Poor	
		Organic matter content low	0.12	Depth to bedrock	0.00	Slope	0.00
		Too acid	0.50	Slope	0.98	Too acid	0.50
		Depth to bedrock	0.54			Depth to bedrock	0.54
		Droughty	0.56				
Ramsey	38	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Slope	0.98	Slope	0.00
		Organic matter content low	0.12			Rock fragments	0.41
		Too acid	0.50			Too acid	0.88
LmE:							
Lily	52	Fair		Poor		Poor	
		Organic matter content low	0.12	Depth to bedrock	0.00	Slope	0.00
		Too acid	0.50	Slope	0.00	Too acid	0.50
		Depth to bedrock	0.54			Depth to bedrock	0.54
		Droughty	0.56				
Ramsey	42	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Depth to bedrock	0.00
		Organic matter content low	0.12			Rock fragments	0.41
		Too acid	0.50			Too acid	0.88

Table 14.—Construction Materials, Part II—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
LoB:							
Lonewood	90	Fair		Fair		Fair	
		Organic matter content low	0.12	Low strength	0.78	Too acid	0.88
		Too acid	0.50	Depth to bedrock	0.92		
		Water erosion	0.99				
LoC:							
Lonewood	84	Fair		Fair		Fair	
		Organic matter content low	0.12	Low strength	0.78	Too acid	0.88
		Too acid	0.50	Depth to bedrock	0.92	Slope	0.96
		Water erosion	0.99				
LP:							
Limestone quarry	100	Not rated		Not rated		Not rated	
Me:							
Melvin	95	Fair		Poor		Poor	
		Too acid	0.08	Wetness depth	0.00	Wetness depth	0.00
		Organic matter content low	0.18	Low strength	0.00	Too acid	0.50
		Water erosion	0.90				
MnC:							
Minvale	95	Fair		Fair		Poor	
		Organic matter content low	0.12	Low strength	0.22	Rock fragments	0.00
		Too acid	0.32			Too clayey	0.53
		Too clayey	0.92			Too acid	0.88
						Hard to reclaim (rock fragments)	0.95
						Slope	0.96
MoC:							
Montevallo	95	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Depth to bedrock	0.00	Cobble content	0.98	Depth to bedrock	0.00
		Organic matter content low	0.12			Too acid	0.50
		Too acid	0.50			Slope	0.96
MoD:							
Montevallo	93	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Depth to bedrock	0.00	Cobble content	0.98	Depth to bedrock	0.00
		Organic matter content low	0.12	Slope	0.98	Slope	0.00
		Too acid	0.50			Too acid	0.50
MoE:							
Montevallo	93	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Rock fragments	0.00
		Organic matter content low	0.12	Cobble content	0.98	Depth to bedrock	0.00
		Too acid	0.50			Too acid	0.50

Table 14.—Construction Materials, Part II—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
Pp:							
Pope	50	Fair		Good		Fair	
		Organic matter content low	0.12			Hard to reclaim (rock fragments)	0.01
		Too acid	0.32			Too acid	0.88
		Water erosion	0.99				
Philo	45	Fair		Fair		Fair	
		Too acid	0.08	Wetness depth	0.76	Wetness depth	0.76
		Water erosion	0.99			Too acid	0.88
						Hard to reclaim (rock fragments)	0.95
RaD:							
Ramsey	75	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Slope	0.98	Slope	0.00
		Organic matter content low	0.12			Rock fragments	0.41
						Too acid	0.88
		Too acid	0.50				
Rock outcrop	20	Not rated		Not rated		Not rated	
RaF:							
Ramsey	70	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Depth to bedrock	0.00
		Organic matter content low	0.12			Rock fragments	0.41
						Too acid	0.88
		Too acid	0.50				
Rock outcrop	30	Not rated		Not rated		Not rated	
Sd:							
Shady	96	Fair		Good		Fair	
		Organic matter content low	0.12			Hard to reclaim (rock fragments)	0.54
		Too acid	0.50			Too acid	0.88
SfB:							
Shady	40	Fair		Good		Fair	
		Organic matter content low	0.12			Hard to reclaim (rock fragments)	0.54
		Too acid	0.50			Too acid	0.88
Swafford	35	Fair		Poor		Fair	
		Too acid	0.12	Low strength	0.00	Too clayey	0.48
		Organic matter content low	0.12	Wetness depth	0.89	Rock fragments	0.76
						Wetness depth	0.89
		Too clayey	0.82			Too acid	0.98
Urban land	25	Not rated		Not rated		Not rated	
ShD:							
Shelocta	97	Fair		Fair		Poor	
		Organic matter content low	0.12	Slope	0.92	Slope	0.00
						Rock fragments	0.00
		Too acid	0.50			Hard to reclaim (rock fragments)	0.50
						Too acid	0.88

Table 14.—Construction Materials, Part II—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
SwB:							
Swafford	94	Fair		Poor		Fair	
		Too acid	0.12	Low strength	0.00	Too clayey	0.48
		Organic matter content low	0.12	Wetness depth	0.89	Rock fragments	0.76
						Wetness depth	0.89
		Too clayey	0.82			Too acid	0.98
TaB:							
Tasso	94	Fair		Good		Fair	
		Organic matter content low	0.12			Rock fragments	0.92
		Too acid	0.32				
TaC:							
Tasso	92	Fair		Good		Fair	
		Organic matter content low	0.12			Rock fragments	0.92
						Slope	0.96
		Too acid	0.32				
TeB2:							
Townley	71	Poor		Poor		Poor	
		Too clayey	0.00	Depth to bedrock	0.00	Too clayey	0.00
		Droughty	0.30	Low strength	0.00	Depth to bedrock	0.35
		Organic matter content low	0.32	Shrink-swell	0.87	Too acid	0.88
		Depth to bedrock	0.35				
		Too acid	0.50				
		Water erosion	0.99				
Coile	21	Poor		Poor		Poor	
		Depth to bedrock	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Too clayey	0.00	Low strength	0.00	Depth to bedrock	0.00
		Organic matter content low	0.18			Too clayey	0.00
						Too acid	0.98
		Too acid	0.54				
		Droughty	0.74				
TeC:							
Townley	96	Fair		Poor		Fair	
		Organic matter content low	0.12	Low strength	0.00	Too clayey	0.48
				Depth to bedrock	0.00	Too acid	0.88
		Too acid	0.50	Shrink-swell	0.87	Rock fragments	0.88
		Too clayey	0.82			Depth to bedrock	0.93
		Droughty	0.83			Slope	0.99
		Depth to bedrock	0.93				
		Water erosion	0.99				
TeD:							
Townley	90	Fair		Poor		Poor	
		Organic matter content low	0.12	Low strength	0.00	Slope	0.00
				Depth to bedrock	0.00	Too clayey	0.48
		Too acid	0.50	Shrink-swell	0.87	Too acid	0.88
		Too clayey	0.82	Slope	0.98	Rock fragments	0.88
		Droughty	0.83			Depth to bedrock	0.93
		Depth to bedrock	0.93				
		Water erosion	0.99				

Table 14.—Construction Materials, Part II—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
TeE:							
Townley	92	Fair		Poor		Poor	
		Organic matter content low	0.12	Low strength	0.00	Slope	0.00
		Too acid	0.50	Depth to bedrock	0.00	Too clayey	0.48
		Too clayey	0.82	Slope	0.00	Too acid	0.88
		Droughty	0.83	Shrink-swell	0.87	Rock fragments	0.88
		Depth to bedrock	0.93			Depth to bedrock	0.93
		Water erosion	0.99				
TuD:							
Townley	45	Fair		Poor		Poor	
		Organic matter content low	0.12	Low strength	0.00	Slope	0.00
		Too acid	0.50	Depth to bedrock	0.00	Too clayey	0.48
		Too clayey	0.82	Shrink-swell	0.87	Too acid	0.88
		Droughty	0.83	Slope	0.98	Rock fragments	0.88
		Depth to bedrock	0.93			Depth to bedrock	0.93
		Water erosion	0.99				
Armuchee	35	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Too clayey	0.00	Low strength	0.78	Too clayey	0.00
		Depth to bedrock	0.01	Shrink-swell	0.87	Slope	0.00
		Organic matter content low	0.12	Slope	0.98	Depth to bedrock	0.01
		Too acid	0.50			Too acid	0.88
		Water erosion	0.99				
Urban land	20	Not rated		Not rated		Not rated	
TuE:							
Townley	45	Fair		Poor		Poor	
		Organic matter content low	0.12	Low strength	0.00	Slope	0.00
		Too acid	0.50	Depth to bedrock	0.00	Too clayey	0.48
		Too clayey	0.82	Slope	0.00	Too acid	0.88
		Droughty	0.83	Shrink-swell	0.87	Rock fragments	0.88
		Depth to bedrock	0.93			Depth to bedrock	0.93
		Water erosion	0.99				
Armuchee	35	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Too clayey	0.00	Slope	0.00	Rock fragments	0.00
		Depth to bedrock	0.01	Low strength	0.78	Too clayey	0.00
		Organic matter content low	0.12	Shrink-swell	0.87	Depth to bedrock	0.01
		Too acid	0.50			Too acid	0.88
		Water erosion	0.99				
Urban land	20	Not rated		Not rated		Not rated	
UrD:							
Urban land	100	Not rated		Not rated		Not rated	
W:							
Water	100	Not rated		Not rated		Not rated	

Table 14.—Construction Materials, Part II—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
WaB:							
Waynesboro----------	93	Fair		Fair		Fair	
		Organic matter content low	0.12	Low strength	0.10	Too clayey	0.29
		Too acid	0.50			Too acid	0.88
		Too clayey	0.50				
WaC:							
Waynesboro----------	93	Fair		Fair		Fair	
		Organic matter content low	0.12	Low strength	0.10	Too clayey	0.29
		Too acid	0.50			Too acid	0.88
		Too clayey	0.50			Slope	0.96
WaD:							
Waynesboro----------	97	Fair		Fair		Poor	
		Organic matter content low	0.12	Low strength	0.10	Slope	0.00
		Too acid	0.50	Slope	0.98	Too clayey	0.29
		Too clayey	0.50			Too acid	0.88
WeD:							
Waynesboro----------	45	Fair		Fair		Fair	
		Organic matter content low	0.12	Low strength	0.10	Too clayey	0.29
		Too acid	0.50			Slope	0.37
		Too clayey	0.50			Too acid	0.88
Etowah--------------	35	Fair		Poor		Fair	
		Organic matter content low	0.12	Low strength	0.00	Slope	0.37
		Too acid	0.50			Too acid	0.88
		Water erosion	0.99				
Urban land----------	20	Not rated		Not rated		Not rated	
WhB:							
Whitwell------------	94	Fair		Fair		Fair	
		Organic matter content low	0.12	Wetness depth	0.89	Too acid	0.88
		Too acid	0.50			Wetness depth	0.89

Table 15.—Water Management

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
AeC:							
Allen---------------	95	Very limited		Not limited		Very limited	
		Slope	1.00			Depth to water	1.00
		Seepage	0.72				
AeD:							
Allen---------------	95	Very limited		Not limited		Very limited	
		Slope	1.00			Depth to water	1.00
		Seepage	0.72				
AfD:							
Allen---------------	43	Very limited		Not limited		Very limited	
		Slope	1.00			Depth to water	1.00
		Seepage	0.72				
Jefferson-----------	32	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.14	Depth to water	1.00
		Slope	1.00				
Urban land----------	25	Not rated		Not rated		Not rated	
AmC:							
Armuchee------------	94	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.99	Depth to water	1.00
		Depth to bedrock	0.42				
		Seepage	0.04				
AmD:							
Armuchee------------	92	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.99	Depth to water	1.00
		Depth to bedrock	0.42				
		Seepage	0.04				
AmE:							
Armuchee------------	97	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.99	Depth to water	1.00
		Depth to bedrock	0.42				
		Seepage	0.04				
ANS:							
Area not surveyed---	100	Not rated		Not rated		Not rated	
ApC:							
Apison--------------	73	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.99	Depth to water	1.00
		Seepage	0.72	Piping	0.08		
		Depth to bedrock	0.37				
Sunlight------------	27	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	0.74				

Table 15.—Water Management—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
ApF:							
Apison	50	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.99	Depth to water	1.00
		Seepage	0.72	Piping	0.08		
		Depth to bedrock	0.37				
Sunlight	44	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	0.74				
ASD:							
Ash disposal area	100	Not rated		Not rated		Not rated	
BeF:							
Bethesda	80	Very limited		Not limited		Very limited	
		Slope	1.00			Depth to water	1.00
		Seepage	0.72				
Mines pit	20	Not rated		Not rated		Not rated	
Bg:							
Bloomingdale	95	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
						Cutbanks cave	0.10
BrE:							
Bradyville	61	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Hard to pack	0.71	Depth to water	1.00
		Depth to bedrock	0.29	Thin layer	0.29		
		Seepage	0.04				
Rock outcrop	39	Not rated		Not rated		Not rated	
CaB:							
Capshaw	88	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.72	Depth to saturated zone	0.68	Slow refill	0.28
		Slope	0.08	Hard to pack	0.48	Depth to saturated zone	0.14
						Cutbanks cave	0.10
CbD:							
Colbert	36	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Hard to pack	0.99	Slow refill	1.00
		Depth to bedrock	0.01	Thin layer	0.01	Depth to saturated zone	0.90
						Cutbanks cave	0.10
						Depth to hard bedrock	0.01
Lyerly	34	Very limited		Very limited		Very limited	
		Slope	1.00	Hard to pack	1.00	Depth to water	1.00
		Depth to bedrock	0.56	Thin layer	0.56		
Rock outcrop	23	Not rated		Not rated		Not rated	
CoC:							
Collegedale	97	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Piping	0.32	Depth to water	1.00
		Seepage	0.04				

Table 15.—Water Management—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
CoD:							
Collegedale	85	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Piping	0.32	Depth to water	1.00
		Seepage	0.04				
DeB:							
Dewey	90	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.72	Hard to pack	0.66	Depth to water	1.00
		Slope	0.08				
DeC:							
Dewey	93	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Hard to pack	0.66	Depth to water	1.00
		Seepage	0.72				
DeD:							
Dewey	93	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Hard to pack	0.66	Depth to water	1.00
		Seepage	0.72				
DeE:							
Dewey	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Hard to pack	0.66	Depth to water	1.00
		Seepage	0.72				
EcB:							
Ealy	60	Very limited		Not limited		Very limited	
		Seepage	1.00			Depth to water	1.00
Craigsville	40	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
				Large stones	0.30		
EtB:							
Etowah	92	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.72	Piping	0.01	Depth to water	1.00
		Slope	0.08				
EtC:							
Etowah	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Piping	0.01	Depth to water	1.00
		Seepage	0.72				
FuB:							
Fullerton	69	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.72	Hard to pack	0.95	Depth to water	1.00
		Slope	0.08				
Pailo	25	Very limited		Not limited		Very limited	
		Seepage	1.00			Depth to water	1.00
		Slope	0.08				
FuC:							
Fullerton	68	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Hard to pack	0.95	Depth to water	1.00
		Seepage	0.72				
Pailo	20	Very limited		Not limited		Very limited	
		Seepage	1.00			Depth to water	1.00
		Slope	1.00				

Table 15.—Water Management—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
FuD:							
Fullerton	67	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Hard to pack	0.95	Depth to water	1.00
		Seepage	0.72				
Pailo	26	Very limited		Not limited		Very limited	
		Seepage	1.00			Depth to water	1.00
		Slope	1.00				
FuE:							
Fullerton	67	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Hard to pack	0.95	Depth to water	1.00
		Seepage	0.72				
Pailo	30	Very limited		Not limited		Very limited	
		Seepage	1.00			Depth to water	1.00
		Slope	1.00				
FwD:							
Fullerton	45	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Hard to pack	0.95	Depth to water	1.00
		Seepage	0.72				
Dewey	35	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Hard to pack	0.66	Depth to water	1.00
		Seepage	0.72				
Urban land	20	Not rated		Not rated		Not rated	
FwE:							
Fullerton	45	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Hard to pack	0.95	Depth to water	1.00
		Seepage	0.72				
Dewey	35	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Hard to pack	0.66	Depth to water	1.00
		Seepage	0.72				
Urban land	20	Not rated		Not rated		Not rated	
GnD:							
Gilpin	94	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.96	Depth to water	1.00
		Seepage	0.72	Piping	0.02		
		Depth to bedrock	0.26				
GpE:							
Gilpin	57	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.96	Depth to water	1.00
		Seepage	0.72	Piping	0.02		
		Depth to bedrock	0.26				
Petros	39	Very limited		Very limited		Very limited	
		Slope	1.00	Seepage	1.00	Depth to water	1.00
		Depth to bedrock	0.61	Thin layer	1.00		
GpF:							
Gilpin	63	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.96	Depth to water	1.00
		Seepage	0.72	Piping	0.02		
		Depth to bedrock	0.26				

Table 15.—Water Management—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
GpF:							
Petros	30	Very limited		Very limited		Very limited	
		Slope	1.00	Seepage	1.00	Depth to water	1.00
		Depth to bedrock	0.61	Thin layer	1.00		
GsF:							
Gilpin	37	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.96	Depth to water	1.00
		Seepage	0.72	Piping	0.02		
		Depth to bedrock	0.26				
Bouldin	36	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Large stones	0.03	Depth to water	1.00
		Slope	1.00				
Petros	23	Very limited		Very limited		Very limited	
		Slope	1.00	Seepage	1.00	Depth to water	1.00
		Depth to bedrock	0.61	Thin layer	1.00		
Ha:							
Hamblen	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.72	Depth to saturated zone	0.86	Slow refill	0.28
						Cutbanks cave	0.10
				Piping	0.18	Depth to saturated zone	0.06
HeB:							
Hendon	96	Somewhat limited		Not limited		Very limited	
		Seepage	0.72			Depth to water	1.00
		Slope	0.08				
HeC:							
Hendon	97	Somewhat limited		Not limited		Very limited	
		Slope	0.92			Depth to water	1.00
		Seepage	0.72				
JeC:							
Jefferson	95	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.14	Depth to water	1.00
		Slope	0.92				
JeE:							
Jefferson	83	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.14	Depth to water	1.00
		Slope	1.00				
JnD:							
Jefferson	95	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.13	Depth to water	1.00
		Slope	1.00				
JnF:							
Jefferson	95	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.13	Depth to water	1.00
		Slope	1.00				
LbB:							
Lily	86	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.86	Depth to water	1.00
		Depth to bedrock	0.86	Piping	0.54		
		Slope	0.08				

Table 15.—Water Management—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
LbC:							
Lily	94	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.86	Depth to water	1.00
		Slope	1.00	Piping	0.54		
		Depth to bedrock	0.86				
LbD:							
Lily	88	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.86	Depth to water	1.00
		Slope	1.00	Piping	0.54		
		Depth to bedrock	0.86				
LgD:							
Lily	47	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.86	Depth to water	1.00
		Slope	1.00	Piping	0.54		
		Depth to bedrock	0.86				
Gilpin	39	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.96	Depth to water	1.00
		Seepage	0.72	Piping	0.02		
		Depth to bedrock	0.26				
LgE:							
Lily	52	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.86	Depth to water	1.00
		Slope	1.00	Piping	0.54		
		Depth to bedrock	0.86				
Gilpin	36	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.96	Depth to water	1.00
		Seepage	0.72	Piping	0.02		
		Depth to bedrock	0.26				
LmD:							
Lily	54	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.86	Depth to water	1.00
		Slope	1.00	Piping	0.54		
		Depth to bedrock	0.86				
Ramsey	38	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	1.00				
LmE:							
Lily	52	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.86	Depth to water	1.00
		Slope	1.00	Piping	0.54		
		Depth to bedrock	0.86				
Ramsey	42	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	1.00				
LoB:							
Lonewood	90	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.72	Piping	0.04	Depth to water	1.00
		Slope	0.08	Thin layer	0.02		
		Depth to bedrock	0.01				

Table 15.—Water Management—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
LoC:							
Lonewood------------	84	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Piping	0.04	Depth to water	1.00
		Seepage	0.72	Thin layer	0.02		
		Depth to bedrock	0.01				
LP:							
Limestone quarry----	100	Not rated		Not rated		Not rated	
Me:							
Melvin--------------	95	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
						Cutbanks cave	0.10
				Piping	0.83		
MnC:							
Minvale-------------	95	Very limited		Not limited		Very limited	
		Seepage	1.00			Depth to water	1.00
		Slope	1.00				
MoC:							
Montevallo----------	95	Very limited		Very limited		Very limited	
		Slope	1.00	Seepage	1.00	Depth to water	1.00
		Depth to bedrock	0.66	Thin layer	1.00		
MoD:							
Montevallo----------	93	Very limited		Very limited		Very limited	
		Slope	1.00	Seepage	1.00	Depth to water	1.00
		Depth to bedrock	0.66	Thin layer	1.00		
MoE:							
Montevallo----------	93	Very limited		Very limited		Very limited	
		Slope	1.00	Seepage	1.00	Depth to water	1.00
		Depth to bedrock	0.66	Thin layer	1.00		
Pp:							
Pope----------------	50	Very limited		Not limited		Very limited	
		Seepage	1.00			Depth to water	1.00
Philo---------------	45	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Depth to saturated zone	0.95	Cutbanks cave	1.00
						Depth to saturated zone	0.02
RaD:							
Ramsey--------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	1.00				
Rock outcrop--------	20	Not rated		Not rated		Not rated	
RaF:							
Ramsey--------------	70	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	1.00				
Rock outcrop--------	30	Not rated		Not rated		Not rated	

Table 15.—Water Management—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
Sd:							
Shady	96	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.27	Depth to water	1.00
SfB:							
Shady	40	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.27	Depth to water	1.00
		Slope	0.08				
Swafford	35	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.72	Depth to saturated zone	0.86	Slow refill	0.28
		Slope	0.08	Piping	0.24	Cutbanks cave	0.10
						Depth to saturated zone	0.06
Urban land	25	Not rated		Not rated		Not rated	
ShD:							
Shelocta	97	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Piping	0.20	Depth to water	1.00
		Seepage	1.00				
SwB:							
Swafford	94	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.72	Depth to saturated zone	0.86	Slow refill	0.28
		Slope	0.08	Piping	0.24	Cutbanks cave	0.10
						Depth to saturated zone	0.06
TaB:							
Tasso	94	Somewhat limited		Not limited		Very limited	
		Seepage	0.72			Depth to water	1.00
		Slope	0.08				
TaC:							
Tasso	92	Very limited		Not limited		Very limited	
		Slope	1.00			Depth to water	1.00
		Seepage	0.72				
TeB2:							
Townley	71	Somewhat limited		Somewhat limited		Very limited	
		Depth to bedrock	0.17	Thin layer	0.91	Depth to water	1.00
		Slope	0.08				
Coile	21	Somewhat limited		Very limited		Very limited	
		Depth to bedrock	0.53	Thin layer	1.00	Depth to water	1.00
		Slope	0.08				
TeC:							
Townley	96	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.66	Depth to water	1.00
		Seepage	0.04				
		Depth to bedrock	0.03				
TeD:							
Townley	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.66	Depth to water	1.00
		Seepage	0.04				
		Depth to bedrock	0.03				

Table 15.—Water Management—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
TeE:							
Townley	92	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.66	Depth to water	1.00
		Seepage	0.04				
		Depth to bedrock	0.03				
TuD:							
Townley	45	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.66	Depth to water	1.00
		Seepage	0.04				
		Depth to bedrock	0.03				
Armuchee	35	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.99	Depth to water	1.00
		Depth to bedrock	0.42				
		Seepage	0.04				
Urban land	20	Not rated		Not rated		Not rated	
TuE:							
Townley	45	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.66	Depth to water	1.00
		Seepage	0.04				
		Depth to bedrock	0.03				
Armuchee	35	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.99	Depth to water	1.00
		Depth to bedrock	0.42				
		Seepage	0.04				
Urban land	20	Not rated		Not rated		Not rated	
UrD:							
Urban land	100	Not rated		Not rated		Not rated	
W:							
Water	100	Not rated		Not rated		Not rated	
WaB:							
Waynesboro	93	Somewhat limited		Not limited		Very limited	
		Seepage	0.72			Depth to water	1.00
		Slope	0.08				
WaC:							
Waynesboro	93	Very limited		Not limited		Very limited	
		Slope	1.00			Depth to water	1.00
		Seepage	0.72				
WaD:							
Waynesboro	97	Very limited		Not limited		Very limited	
		Slope	1.00			Depth to water	1.00
		Seepage	0.72				
WeD:							
Waynesboro	45	Very limited		Not limited		Very limited	
		Slope	1.00			Depth to water	1.00
		Seepage	0.72				

Table 15.—Water Management—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
WeD:							
Etowah	35	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Piping	0.01	Depth to water	1.00
		Seepage	0.72				
Urban land	20	Not rated		Not rated		Not rated	
WhB:							
Whitwell	94	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.72	Depth to saturated zone	0.86	Slow refill	0.28
						Cutbanks cave	0.10
				Piping	0.64	Depth to saturated zone	0.06

Table 16.—Engineering Index Properties

(Absence of an entry indicates that the data were not estimated. An asterisk denotes the representative texture; other possible textures follow)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
AeC:												
Allen-----------	0-3	*Loam	*CL, ML, SC-SM, SM	*A-4,	0	0-4	94-100	83-100	68-97	47-72	21-41	6-17
	3-28	*Clay loam, Sandy clay loam, loam	*CL,	*A-6, A-7-6	0	0-4	94-100	84-100	66-96	50-77	27-44	12-25
	28-60	*Gravelly clay loam, Stony clay loam, gravelly sandy clay loam, cobbly clay	*CL, SC	*A-7-6, A-6, A-7	0	9-20	85-92	68-84	56-84	43-68	35-53	18-32
AeD:												
Allen-----------	0-3	*Loam	*CL, ML, SC-SM, SM	*A-4,	0	0-4	94-100	83-100	68-97	47-72	21-41	6-17
	3-28	*Clay loam, Sandy clay loam, loam	*CL,	*A-6, A-7-6	0	0-4	94-100	84-100	66-96	50-77	27-44	12-25
	28-60	*Gravelly clay loam, Stony clay loam, gravelly sandy clay loam, cobbly clay	*CL, SC	*A-7-6, A-6, A-7	0	9-20	85-92	68-84	56-84	43-68	35-53	18-32
AfD:												
Allen-----------	0-3	*Loam	*CL, ML, SC-SM, SM	*A-4,	0	0-4	94-100	83-100	68-97	47-72	21-41	6-17
	3-28	*Clay loam, Sandy clay loam, loam	*CL,	*A-6, A-7-6	0	0-4	94-100	84-100	66-96	50-77	27-44	12-25
	28-60	*Gravelly clay loam, Stony clay loam, gravelly sandy clay loam, cobbly clay	*CL, SC	*A-7-6, A-6, A-7	0	9-20	85-92	68-84	56-84	43-68	35-53	18-32
Jefferson-------	0-11	*Loam	*CL, CL-ML, ML	*A-6,	0	0-3	90-100	81-100	61-94	42-70	19-43	3-17
	11-35	*Clay loam, Loam	*CL,	*A-6, A-7	0	0	91-100	80-100	63-95	47-75	27-43	12-24
	35-48	*Gravelly loam, Gravelly clay loam, gravelly sandy clay loam	*SC, CL	*A-6,	0	0-4	81-91	60-77	49-76	36-59	27-43	12-24
	48-60	*Gravelly fine sandy loam	*SC, SM, SC-SM	*A-2-4, A-2, A-4	0	0-14	85-89	65-78	56-78	22-39	16-32	2-13
Urban land.												

Table 16.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas-ticity index
	In				Pct	Pct					Pct	
AmC:												
Armuchee--------	0-6	*Silt loam	*CL,	*A-6,	0	0-3	90-100	79-100	73-100	65-92	32-45	15-22
	6-11	*Channery silty clay loam, Channery silty clay	*CL, CH	*A-7-6,	0	0-3	80-90	58-74	56-74	54-74	45-56	26-34
	11-21	*Very channery silty clay, Very channery silty clay loam	*SC, GC	*A-7-6, A-2	0	0-8	72-77	38-49	36-49	34-49	43-55	25-32
	21-40	*Weathered bedrock			---	---	---	---	---	---	---	---
AmD:												
Armuchee--------	0-6	*Silt loam	*CL,	*A-6,	0	0-3	90-100	79-100	73-100	65-92	32-45	15-22
	6-11	*Channery silty clay loam, Channery silty clay	*CL, CH	*A-7-6,	0	0-3	80-90	58-74	56-74	54-74	45-56	26-34
	11-21	*Very channery silty clay, Very channery silty clay loam	*SC, GC	*A-7-6, A-2	0	0-8	72-77	38-49	36-49	34-49	43-55	25-32
	21-40	*Weathered bedrock			---	---	---	---	---	---	---	---
AmE:												
Armuchee--------	0-6	*Silt loam	*CL,	*A-6,	0	0-3	90-100	79-100	73-100	65-92	32-45	15-22
	6-11	*Channery silty clay loam, Channery silty clay	*CL, CH	*A-7-6,	0	0-3	80-90	58-74	56-74	54-74	45-56	26-34
	11-21	*Very channery silty clay, Very channery silty clay loam	*SC, GC	*A-7-6, A-2	0	0-8	72-77	38-49	36-49	34-49	43-55	25-32
	21-40	*Weathered bedrock			---	---	---	---	---	---	---	---
ANS. Area not surveyed												
ApC:												
Apison----------	0-3	*Loam, Silt loam	*CL, CL-ML, ML	*A-6,	0	0	85-100	76-100	62-97	44-73	24-43	7-18
	3-22	*Clay loam, Channery clay loam, loam, silty clay loam	*CL,	*A-6,	0	0	90-100	77-100	64-98	49-78	29-44	13-25
	22-60	*Weathered bedrock			---	---	---	---	---	---	---	---
Sunlight--------	0-3	*Channery sandy loam	*SC,	*A-2-6,	0	1-5	72-87	55-76	38-65	17-36	22-41	6-19
	3-13	*Very channery loam, Channery loam, very channery clay loam, very channery silt loam	*GC, GC-GM, SC	*A-2-6, A-6	0	0-12	55-67	33-61	27-60	20-47	27-44	12-25
	13-20	*Weathered bedrock			---	---	---	---	---	---	---	---

Table 16.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
ApF:												
Apison----------	0-3	*Loam, Silt loam	*CL, CL-ML, ML	*A-6,	0	0	85-100	76-100	62-97	44-73	24-43	7-18
	3-22	*Clay loam, Channery clay loam, loam, silty clay loam	*CL,	*A-6,	0	0	90-100	77-100	64-98	49-78	29-44	13-25
	22-60	*Weathered bedrock			---	---	---	---	---	---	---	---
Sunlight--------	0-3	*Channery sandy loam	*SC,	*A-2-6,	0	1-5	72-87	55-76	38-65	17-36	22-41	6-19
	3-13	*Very channery loam, Channery loam, very channery clay loam, very channery silt loam	*GC, GC-GM, SC	*A-2-6, A-6	0	0-12	55-67	33-61	27-60	20-47	27-44	12-25
	13-20	*Weathered bedrock			---	---	---	---	---	---	---	---
ASD. Ash disposal Area												
BeF:												
Bethesda--------	0-23	*Channery loam	*SC,	*A-6,	0	0-11	65-81	64-80	54-75	40-57	27-38	12-19
	23-46	*Very channery clay loam, Very channery silty clay loam, channery clay loam	*GC, GC-GM	*A-2-6, A-7	0	0-10	42-62	39-60	31-58	23-46	27-44	12-25
	46-60	*Cobbly loam, Channery clay loam	*CL, GC-GM, GM, ML, GC	*A-6, A-4, A-7	0	15-24	84-96	78-94	58-94	40-79	18-49	3-28
Mines pit.												
Bg:												
Bloomingdale----	0-9	*Silty clay loam	*CL,	*A-7-6,	0	0	94-100	82-100	72-100	63-89	29-45	12-21
	9-80	*Silty clay, Silty clay loam, clay	*CH, CL	*A-7-6,	0	0	95-100	88-100	76-100	73-100	44-68	25-44
BrE:												
Bradyville------	0-6	*Gravelly silt loam	*CL, CL-ML, GM, SM, GC-GM, SC-SM	*A-4,	0	5-17	80-93	59-77	51-76	41-63	20-35	4-13
	6-44	*Clay, Silty clay	*CH,	*A-7-6,	0	0-5	85-100	66-100	55-100	47-91	48-67	28-44
	44-48	*Unweathered bedrock			---	---	---	---	---	---	---	---
Rock outcrop.												

Table 16.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas-ticity index
	In				Pct	Pct					Pct	
CaB:												
Capshaw---------	0-4	*Silt loam	*CL, CL-ML, ML	*A-6,	0	0	90-100	76-100	67-100	55-85	27-43	9-18
	4-24	*Silty clay loam, Silty clay, silt loam	*CL,	*A-7-6, A-7	0	0	90-100	76-100	68-100	60-99	33-53	17-32
	24-36	*Clay, Silty clay, silty clay loam	*CH, CL	*A-7-6,	0	0	90-100	77-100	65-100	52-88	43-63	25-40
	36-72	*Silty clay, Silty clay loam, clay	*CH, CL	*A-7-6,	0	0	88-100	76-100	66-100	63-100	43-67	25-44
	72-76	*Weathered bedrock			---	---	---	---	---	---	---	---
CbD:												
Colbert---------	0-9	*Silt loam	*CL, CL-ML, ML	*A-6, A-4	0	0	95-100	85-100	64-98	54-86	17-41	2-19
	9-58	*Clay, Silty clay	*CH,	*A-7-6,	0	0	94-100	81-100	72-100	66-100	58-78	36-51
	58-60	*Unweathered bedrock			---	---	---	---	---	---	---	---
Lyerly----------	0-5	*Silt loam	*CL, CL-ML	*A-6, A-4	0	0	95-100	84-100	72-100	60-92	27-49	10-25
	5-10	*Silty clay loam	*CL, CH	*A-7-6, A-6	0	0	95-100	89-100	83-100	74-100	39-57	19-33
	10-38	*Clay	*CH,	*A-7-6,	0	0	95-100	85-100	76-100	72-99	67-82	44-55
	38-40	*Unweathered bedrock			---	---	---	---	---	---	---	---
Rock outcrop.												
CoC:												
Collegedale-----	0-5	*Silt loam	*CL, CL-ML	*A-6, A-4	0	0-1	89-100	77-100	66-98	57-86	26-40	9-18
	5-80	*Silty clay, Clay	*CH, CL	*A-7-6,	0	0-1	92-100	82-100	69-100	66-100	43-67	25-44
CoD:												
Collegedale-----	0-5	*Silt loam	*CL, CL-ML	*A-6, A-4	0	0-1	89-100	77-100	66-98	57-86	26-40	9-18
	5-80	*Silty clay, Clay	*CH, CL	*A-7-6,	0	0-1	92-100	82-100	69-100	66-100	43-67	25-44
DeB:												
Dewey-----------	0-7	*Silt loam	*CL, CL-ML	*A-6, A-4	0	0-3	89-100	78-100	69-100	57-85	26-41	9-19
	7-27	*Silty clay loam, Silty clay, clay	*CL,	*A-7-6,	0	0-3	89-100	78-100	74-100	71-100	43-67	25-44
	27-60	*Silty clay, Clay	*CH,	*A-7-6,	0	0-3	91-100	83-100	77-100	75-100	52-67	32-44
DeC:												
Dewey-----------	0-7	*Silt loam	*CL, CL-ML	*A-6, A-4	0	0-3	89-100	78-100	69-100	57-85	26-41	9-19
	7-27	*Silty clay loam, Silty clay, clay	*CL,	*A-7-6,	0	0-3	89-100	78-100	74-100	71-100	43-67	25-44
	27-60	*Silty clay, Clay	*CH,	*A-7-6,	0	0-3	91-100	83-100	77-100	75-100	52-67	32-44

Table 16.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
DeD:												
Dewey-----------	0-7	*Silt loam	*CL, CL-ML	*A-6, A-4	0	0-3	89-100	78-100	69-100	57-85	26-41	9-19
	7-27	*Silty clay loam, Silty clay, clay	*CL,	*A-7-6,	0	0-3	89-100	78-100	74-100	71-100	43-67	25-44
	27-60	*Silty clay, Clay	*CH,	*A-7-6,	0	0-3	91-100	83-100	77-100	75-100	52-67	32-44
DeE:												
Dewey-----------	0-7	*Silt loam	*CL, CL-ML	*A-6, A-4	0	0-3	89-100	78-100	69-100	57-85	26-41	9-19
	7-27	*Silty clay loam, Silty clay, clay	*CL,	*A-7-6,	0	0-3	89-100	78-100	74-100	71-100	43-67	25-44
	27-60	*Silty clay, Clay	*CH,	*A-7-6,	0	0-3	91-100	83-100	77-100	75-100	52-67	32-44
EcB:												
Ealy------------	0-10	*Fine sandy loam	*SC, SM	*A-4, A-2	0	0-3	91-100	82-100	69-96	28-47	18-35	2-12
	10-60	*Fine sandy loam, Loamy fine sand	*SC, SC-SM	*A-4, A-2	0	0-2	91-100	83-100	68-96	25-44	17-31	2-12
Craigsville-----	0-3	*Cobbly fine sandy loam	*SC-SM, SC	*A-2-4, A-2	0	22-31	86-98	74-96	64-92	26-43	18-33	2-10
	3-21	*Very cobbly sandy loam, Gravelly sandy loam, cobbly loam	*SC-SM, SC	*A-2-4, A-1, A-2	0	20-29	76-91	43-91	30-72	13-37	16-27	2-10
	21-60	*Extremely cobbly loamy sand, Very gravelly sandy loam, very cobbly sandy loam	*GP-GC,	*A-1-a,	0	21-53	31-76	14-66	11-54	3-17	16-23	2-6
EtB:												
Etowah----------	0-12	*Loam, Silt loam	*CL, CL-ML, ML, SC-SM	*A-4,	0	0	82-100	75-100	61-98	44-75	21-41	4-17
	12-27	*Loam, Silty clay loam, clay loam, silt loam	*CL,	*A-6,	0	0	83-100	76-100	63-100	46-78	27-44	12-25
	27-60	*Clay loam, Silty clay loam, clay	*CL,	*A-7-6, A-7	0	0	83-100	77-100	57-99	43-79	27-50	12-30
EtC:												
Etowah----------	0-12	*Silt loam, Loam	*CL, CL-ML, ML, SC-SM	*A-4,	0	0	82-100	75-100	63-100	48-81	21-41	4-17
	12-27	*Loam, Silty clay loam, clay loam, silt loam	*CL,	*A-6,	0	0	83-100	76-100	63-100	46-78	27-44	12-25
	27-60	*Clay loam, Silty clay loam, clay	*CL,	*A-7-6, A-7	0	0	83-100	77-100	57-99	43-79	27-50	12-30
FuB:												
Fullerton-------	0-7	*Gravelly silt loam	*CL, CL-ML, GC, GC-GM	*A-6,	0	1-13	77-88	58-75	51-75	42-64	26-41	9-19
	7-60	*Gravelly clay, Gravelly silty clay	*CH,	*A-7-6,	0	1-13	77-88	58-75	47-75	41-75	48-76	28-51

Table 16.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
FuB:												
Pailo-----------	0-15	*Gravelly silt loam, Gravelly loam	*SC, CL, GC, SC-SM	*A-4,	0	0-5	77-90	53-73	46-72	37-60	21-35	4-13
	15-40	*Very gravelly silty clay loam, Very gravelly clay loam, very gravelly loam	*SC, CL	*A-6, A-2	0	7-12	58-77	30-53	27-53	24-50	29-44	13-25
	40-80	*Gravelly clay, Very gravelly silty clay loam, very gravelly clay loam, very gravelly clay, very gravelly loam	*SC, CL	*A-7-6, A-2, A-7	0	1-5	76-87	54-75	38-75	29-63	29-57	13-36
FuC:												
Fullerton-------	0-7	*Gravelly silt loam	*CL, CL-ML, GC, GC-GM	*A-6,	0	1-13	77-88	58-75	51-75	42-64	26-41	9-19
	7-60	*Gravelly clay, Gravelly silty clay	*CH,	*A-7-6,	0	1-13	77-88	58-75	47-75	41-75	48-76	28-51
Pailo-----------	0-15	*Gravelly silt loam, Gravelly loam	*SC, CL, GC, SC-SM	*A-4,	0	0-5	77-90	53-73	46-72	37-60	21-35	4-13
	15-40	*Very gravelly silty clay loam, Very gravelly clay loam, very gravelly loam	*SC, CL	*A-6, A-2	0	7-12	58-77	30-53	27-53	24-50	29-44	13-25
	40-80	*Gravelly clay, Very gravelly silty clay loam, very gravelly clay loam, very gravelly clay, very gravelly loam	*SC, CL	*A-7-6, A-2, A-7	0	1-5	76-87	54-75	38-75	29-63	29-57	13-36
FuD:												
Fullerton-------	0-7	*Gravelly silt loam	*CL, CL-ML, GC, GC-GM	*A-6,	0	1-13	77-88	58-75	51-75	42-64	26-41	9-19
	7-60	*Gravelly clay, Gravelly silty clay	*CH,	*A-7-6,	0	1-13	77-88	58-75	47-75	41-75	48-76	28-51

Table 16.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
FuD:												
Pailo-----------	0-15	*Gravelly silt loam, Gravelly loam	*SC, CL, GC, SC-SM	*A-4,	0	0-5	77-90	53-73	46-72	37-60	21-35	4-13
	15-40	*Very gravelly silty clay loam, Very gravelly clay loam, very gravelly loam	*SC, CL	*A-6, A-2	0	7-12	58-77	30-53	27-53	24-50	29-44	13-25
	40-80	*Gravelly clay, Very gravelly silty clay loam, very gravelly clay loam, very gravelly clay, very gravelly loam	*SC, CL	*A-7-6, A-2, A-7	0	1-5	76-87	54-75	38-75	29-63	29-57	13-36
FuE:												
Fullerton-------	0-7	*Gravelly silt loam	*CL, CL-ML, GC, GC-GM	*A-6,	0	1-13	77-88	58-75	51-75	42-64	26-41	9-19
	7-60	*Gravelly clay, Gravelly silty clay	*CH,	*A-7-6,	0	1-13	77-88	58-75	47-75	41-75	48-76	28-51
Pailo-----------	0-15	*Gravelly silt loam, Gravelly loam	*SC, CL, GC, SC-SM	*A-4,	0	0-5	77-90	53-73	46-72	37-60	21-35	4-13
	15-40	*Very gravelly silty clay loam, Very gravelly clay loam, very gravelly loam	*SC, CL	*A-6, A-2	0	7-12	58-77	30-53	27-53	24-50	29-44	13-25
	40-80	*Gravelly clay, Very gravelly silty clay loam, very gravelly clay loam, very gravelly clay, very gravelly loam	*SC, CL	*A-7-6, A-2, A-7	0	1-5	76-87	54-75	38-75	29-63	29-57	13-36
FwD:												
Fullerton-------	0-7	*Gravelly silt loam	*CL, CL-ML, GC, GC-GM	*A-6,	0	1-13	77-88	58-75	51-75	42-64	26-41	9-19
	7-60	*Gravelly clay, Gravelly silty clay	*CH,	*A-7-6,	0	1-13	77-88	58-75	47-75	41-75	48-76	28-51
Dewey-----------	0-7	*Silt loam	*CL, CL-ML	*A-6, A-4	0	0-3	89-100	78-100	69-100	57-85	26-41	9-19
	7-27	*Silty clay loam, Silty clay, clay	*CL,	*A-7-6,	0	0-3	89-100	78-100	74-100	71-100	43-67	25-44
	27-60	*Silty clay, Clay	*CH,	*A-7-6,	0	0-3	91-100	83-100	77-100	75-100	52-67	32-44
Urban land.												

Table 16.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
FwE:												
Fullerton-------	0-7	*Gravelly silt loam	*CL, CL-ML, GC, GC-GM	*A-6,	0	1-13	77-88	58-75	51-75	42-64	26-41	9-19
	7-60	*Gravelly clay, Gravelly silty clay	*CH,	*A-7-6,	0	1-13	77-88	58-75	47-75	41-75	48-76	28-51
Dewey-----------	0-7	*Silt loam	*CL, CL-ML	*A-6, A-4	0	0-3	89-100	78-100	69-100	57-85	26-41	9-19
	7-27	*Silty clay loam, Silty clay, clay	*CL,	*A-7-6,	0	0-3	89-100	78-100	74-100	71-100	43-67	25-44
	27-60	*Silty clay, Clay	*CH,	*A-7-6,	0	0-3	91-100	83-100	77-100	75-100	52-67	32-44
Urban land.												
GnD:												
Gilpin----------	0-6	*Silt loam	*CL, CL-ML	*A-6, A-4	0	2-3	91-96	78-92	66-92	54-78	23-45	7-18
	6-21	*Silty clay loam, Clay loam	*CL,	*A-7-6,	0	1-3	92-97	80-93	69-93	60-86	27-45	12-25
	21-25	*Channery silty clay loam, Silt loam, channery silt loam	*CL, GC, SC	*A-6,	0	0-1	76-86	50-73	45-73	39-72	27-49	12-28
	25-35	*Weathered bedrock			---	---	---	---	---	---	---	---
GpE:												
Gilpin----------	0-6	*Silt loam	*CL, CL-ML	*A-6, A-4	0	2-3	91-96	78-92	66-92	54-78	23-45	7-18
	6-21	*Silty clay loam, Clay loam	*CL,	*A-7-6,	0	1-3	92-97	80-93	69-93	60-86	27-45	12-25
	21-25	*Channery silty clay loam, Silt loam, channery silt loam	*CL, GC, SC	*A-6,	0	0-1	76-86	50-73	45-73	39-72	27-49	12-28
	25-35	*Weathered bedrock			---	---	---	---	---	---	---	---
Petros----------	0-2	*Channery silt loam	*CL, CL-ML	*A-6,	0	0	70-83	51-73	44-73	36-64	23-41	7-19
	2-8	*Very channery silt loam	*SC, GC-GM	*A-2-6, A-2, A-6	0	0-5	64-72	29-49	26-49	21-42	22-39	7-19
	8-16	*Extremely channery silt loam	*GC, GC-GM	*A-2-6,	0	7-20	38-54	8-27	7-27	6-23	22-38	7-19
	16-18	*Weathered bedrock			---	---	---	---	---	---	---	---
GpF:												
Gilpin----------	0-6	*Silt loam	*CL, CL-ML	*A-6, A-4	0	2-3	91-96	78-92	66-92	54-78	23-45	7-18
	6-21	*Silty clay loam, Clay loam	*CL,	*A-7-6,	0	1-3	92-97	80-93	69-93	60-86	27-45	12-25
	21-25	*Channery silty clay loam, Silt loam, channery silt loam	*CL, GC, SC	*A-6,	0	0-1	76-86	50-73	45-73	39-72	27-49	12-28
	25-35	*Weathered bedrock			---	---	---	---	---	---	---	---

Table 16.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
GpF:												
Petros----------	0-2	*Channery silt loam	*CL, CL-ML	*A-6,	0	0	70-83	51-73	44-73	36-64	23-41	7-19
	2-8	*Very channery silt loam	*SC, GC-GM	*A-2-6, A-2, A-6	0	0-5	64-72	29-49	26-49	21-42	22-39	7-19
	8-16	*Extremely channery silt loam	*GC, GC-GM	*A-2-6,	0	7-20	38-54	8-27	7-27	6-23	22-38	7-19
	16-18	*Weathered bedrock			---	---	---	---	---	---	---	---
GsF:												
Gilpin----------	0-6	*Silt loam	*CL, CL-ML	*A-6, A-4	0	2-3	91-96	78-92	66-92	54-78	23-45	7-18
	6-21	*Silty clay loam, Clay loam	*CL,	*A-7-6,	0	1-3	92-97	80-93	69-93	60-86	27-45	12-25
	21-25	*Channery silty clay loam, Silt loam, channery silt loam	*CL, GC, SC	*A-6,	0	0-1	76-86	50-73	45-73	39-72	27-49	12-28
	25-35	*Weathered bedrock			---	---	---	---	---	---	---	---
Bouldin---------	0-2	*Flaggy loam, Stony loam	*CL, GM, ML, SM, GC-GM	*A-4,	13-16	13-15	82-96	76-94	60-93	41-70	20-43	3-18
	2-17	*Very channery loam, Channery loam, extremely channery loam, channery fine sandy loam, very channery fine sandy loam, extremely channery fine sandy loam	*SC, GC-GM, SC-SM	*A-2-6, A-2, A-4	0-12	6-9	69-76	37-56	29-54	20-40	19-41	3-19
	17-30	*Very channery loam, Channery loam, extremely channery loam, channery fine sandy loam, very channery fine sandy loam, extremely channery fine sandy loam	*SC, GC-GM, SC-SM	*A-2-6, A-2, A-4	0-12	6-9	69-76	37-56	29-54	20-40	19-41	3-19
	30-80	*Extremely flaggy clay loam, Very channery clay loam, extremely channery clay loam, very flaggy clay loam, flaggy loam, extremely channery loam, very flaggy loam, extremely flaggy loam	*SC, GC	*A-6, A-2, A-4	35-39	32-36	59-86	20-72	14-69	10-56	18-44	3-25

Table 16.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
GsF:												
Petros----------	0-2	*Channery silt loam	*CL, CL-ML	*A-6,	0	0	70-83	51-73	44-73	36-64	23-41	7-19
	2-8	*Very channery silt loam	*SC, GC-GM	*A-2-6, A-2, A-6	0	0-5	64-72	29-49	26-49	21-42	22-39	7-19
	8-16	*Extremely channery silt loam	*GC, GC-GM	*A-2-6,	0	7-20	38-54	8-27	7-27	6-23	22-38	7-19
	16-18	*Weathered bedrock			---	---	---	---	---	---	---	---
Ha:												
Hamblen---------	0-5	*Silt loam	*CL, CL-ML, ML	*A-6, A-4	0	0-1	90-100	79-100	70-99	58-83	27-41	9-17
	5-43	*Silt loam, Loam, clay loam	*CL,	*A-6,	0	0-1	90-100	79-100	70-100	61-91	27-43	12-22
	43-62	*Loam, Clay loam, sandy clay loam	*CL,	*A-6,	0	0-1	90-100	80-100	67-99	50-77	29-45	13-25
HeB:												
Hendon----------	0-2	*Silt loam, Loam	*CL, CL-ML, ML	*A-6,	0	0	100	90-100	79-100	65-84	24-41	7-17
	2-9	*Silt loam	*CL, CL-ML	*A-6,	0	0	100	90-100	79-100	65-84	22-36	7-17
	9-22	*Silty clay loam	*CL,	*A-7-6, A-7	0	0	96-100	83-100	59-100	50-94	18-49	3-28
	22-30	*Clay loam, Loam	*CL,	*A-7-6, A-7	0	0	92-100	81-100	62-99	46-79	27-49	12-28
	30-60	*Clay loam, Loam	*CL,	*A-7-6, A-7	0	0	96-100	83-100	63-99	47-79	27-49	12-28
HeC:												
Hendon----------	0-2	*Silt loam, Loam	*CL, CL-ML, ML	*A-6,	0	0	100	90-100	79-100	65-84	24-41	7-17
	2-9	*Silt loam	*CL, CL-ML	*A-6,	0	0	100	90-100	79-100	65-84	22-36	7-17
	9-22	*Silty clay loam	*CL,	*A-7-6, A-7	0	0	96-100	83-100	59-100	50-94	18-49	3-28
	22-30	*Clay loam, Loam	*CL,	*A-7-6, A-7	0	0	92-100	81-100	62-99	46-79	27-49	12-28
	30-60	*Clay loam, Loam	*CL,	*A-7-6, A-7	0	0	96-100	83-100	63-99	47-79	27-49	12-28
JeC:												
Jefferson-------	0-11	*Loam	*CL, CL-ML, ML	*A-6,	0	0-3	90-100	81-100	61-94	42-70	19-43	3-17
	11-35	*Clay loam, Loam	*CL,	*A-6, A-7	0	0	91-100	80-100	63-95	47-75	27-43	12-24
	35-48	*Gravelly loam, Gravelly clay loam, gravelly sandy clay loam	*SC, CL	*A-6,	0	0-4	81-91	60-77	49-76	36-59	27-43	12-24
	48-60	*Gravelly fine sandy loam	*SC, SC-SM, SM	*A-2-4, A-2, A-4	0	0-14	85-89	65-78	56-78	22-39	16-32	2-13

Table 16.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments >10 inches	Fragments 3-10 inches	Percentage passing sieve number-- 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
JeE:												
Jefferson-------	0-11	*Loam	*CL, CL-ML, ML	*A-6,	0	0-3	90-100	81-100	61-94	42-70	19-43	3-17
	11-35	*Clay loam, Loam	*CL,	*A-6, A-7	0	0	91-100	80-100	63-95	47-75	27-43	12-24
	35-48	*Gravelly loam, Gravelly clay loam, gravelly sandy clay loam	*SC, CL	*A-6,	0	0-4	81-91	60-77	49-76	36-59	27-43	12-24
	48-60	*Gravelly fine sandy loam	*SC, SC-SM, SM	*A-2-4, A-2, A-4	0	0-14	85-89	65-78	56-78	22-39	16-32	2-13
JnD:												
Jefferson-------	0-7	*Cobbly loam	*CL, GM, ML, SM	*A-6,	0	12-29	80-87	74-87	60-83	41-61	21-45	6-17
	7-40	*Cobbly loam, Cobbly clay loam, gravelly sandy clay loam	*CL, SC	*A-6,	0	11-27	81-87	75-87	62-86	45-67	27-43	12-24
	40-56	*Very cobbly clay loam	*CL, SC-SM	*A-6, A-4	12-16	29-40	66-86	65-85	46-82	31-62	21-45	6-25
	56-60	*Very gravelly sandy loam, Cobbly loam, cobbly clay loam	*SC,	*A-2-6,	0	8-14	69-82	38-57	28-50	14-29	24-40	9-21
JnF:												
Jefferson-------	0-7	*Cobbly loam	*CL, GM, ML, SM	*A-6,	0	12-29	80-87	74-87	60-83	41-61	21-45	6-17
	7-40	*Cobbly loam, Cobbly clay loam, gravelly sandy clay loam	*CL, SC	*A-6,	0	11-27	81-87	75-87	62-86	45-67	27-43	12-24
	40-56	*Very cobbly clay loam	*CL, SC-SM	*A-6, A-4	12-16	29-40	66-86	65-85	46-82	31-62	21-45	6-25
	56-60	*Very gravelly sandy loam, Cobbly loam, cobbly clay loam	*SC,	*A-2-6,	0	8-14	69-82	38-57	28-50	14-29	24-40	9-21
LbB:												
Lily------------	0-3	*Loam	*CL, CL-ML, ML	*A-6,	0	0-1	92-100	82-100	62-96	42-72	19-45	3-18
	3-30	*Loam, Clay loam	*CL, ML, SC, SM	*A-6, A-4	0	0-1	92-100	82-100	60-94	42-71	18-38	3-19
	30-37	*Unweathered bedrock			---	---	---	---	---	---	---	---
LbC:												
Lily------------	0-3	*Loam	*CL, CL-ML, ML	*A-6,	0	0-1	92-100	82-100	62-96	42-72	19-45	3-18
	3-30	*Loam, Clay loam	*CL, ML, SC, SM	*A-6, A-4	0	0-1	92-100	82-100	60-94	42-71	18-38	3-19
	30-37	*Unweathered bedrock			---	---	---	---	---	---	---	---

Table 16.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
LbD:												
Lily------------	0-3	*Loam	*CL, CL-ML, ML	*A-6,	0	0-1	92-100	82-100	62-96	42-72	19-45	3-18
	3-30	*Loam, Clay loam	*CL, ML, SC, SM	*A-6, A-4	0	0-1	92-100	82-100	60-94	42-71	18-38	3-19
	30-37	*Unweathered bedrock			---	---	---	---	---	---	---	---
LgD:												
Lily------------	0-3	*Loam	*CL, CL-ML, ML	*A-6,	0	0-1	92-100	82-100	62-96	42-72	19-45	3-18
	3-30	*Loam, Clay loam	*CL, ML, SC, SM	*A-6, A-4	0	0-1	92-100	82-100	60-94	42-71	18-38	3-19
	30-37	*Unweathered bedrock			---	---	---	---	---	---	---	---
Gilpin----------	0-6	*Silt loam	*CL, CL-ML	*A-6, A-4	0	2-3	91-96	78-92	66-92	54-78	23-45	7-18
	6-21	*Silty clay loam, Clay loam	*CL,	*A-7-6,	0	1-3	92-97	80-93	69-93	60-86	27-45	12-25
	21-25	*Channery silty clay loam, Silt loam, channery silt loam	*CL, GC, SC	*A-6,	0	0-1	76-86	50-73	45-73	39-72	27-49	12-28
	25-35	*Weathered bedrock			---	---	---	---	---	---	---	---
LgE:												
Lily------------	0-3	*Loam	*CL, CL-ML, ML	*A-6,	0	0-1	92-100	82-100	62-96	42-72	19-45	3-18
	3-30	*Loam, Clay loam	*CL, ML, SC, SM	*A-6, A-4	0	0-1	92-100	82-100	60-94	42-71	18-38	3-19
	30-37	*Unweathered bedrock			---	---	---	---	---	---	---	---
Gilpin----------	0-6	*Silt loam	*CL, CL-ML	*A-6, A-4	0	2-3	91-96	78-92	66-92	54-78	23-45	7-18
	6-21	*Silty clay loam, Clay loam	*CL,	*A-7-6,	0	1-3	92-97	80-93	69-93	60-86	27-45	12-25
	21-25	*Channery silty clay loam, Silt loam, channery silt loam	*CL, GC, SC	*A-6,	0	0-1	76-86	50-73	45-73	39-72	27-49	12-28
	25-35	*Weathered bedrock			---	---	---	---	---	---	---	---
LmD:												
Lily------------	0-3	*Loam	*CL, CL-ML, ML	*A-6,	0	0-1	92-100	82-100	62-96	42-72	19-45	3-18
	3-30	*Loam, Clay loam	*CL, ML, SC, SM	*A-6, A-4	0	0-1	92-100	82-100	60-94	42-71	18-38	3-19
	30-37	*Unweathered bedrock			---	---	---	---	---	---	---	---

Table 16.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
LmD:												
Ramsey----------	0-4	*Loam	*CL, CL-ML, SC-SM, SM	*A-4,	0	0-6	92-100	84-100	67-97	46-72	20-39	4-17
	4-10	*Fine sandy loam, Sandy loam, gravelly sandy loam	*SC, SC-SM	*A-4, A-2	0	0-6	91-100	83-100	70-100	28-50	18-36	4-17
	10-16	*Channery sandy loam, Sandy loam	*SC,	*A-2-4, A-1, A-2	0	6-13	82-89	64-82	46-73	21-41	18-36	4-17
	16-18	*Unweathered bedrock			---	---	---	---	---	---	---	---
LmE:												
Lily------------	0-3	*Loam	*CL, CL-ML, ML	*A-6,	0	0-1	92-100	82-100	62-96	42-72	19-45	3-18
	3-30	*Loam, Clay loam	*CL, ML, SC, SM	*A-6, A-4	0	0-1	92-100	82-100	60-94	42-71	18-38	3-19
	30-37	*Unweathered bedrock			---	---	---	---	---	---	---	---
Ramsey----------	0-4	*Loam	*CL, CL-ML, SC-SM, SM	*A-4,	0	0-6	92-100	84-100	67-97	46-72	20-39	4-17
	4-10	*Fine sandy loam, Sandy loam, gravelly sandy loam	*SC, SC-SM	*A-4, A-2	0	0-6	91-100	83-100	70-100	28-50	18-36	4-17
	10-16	*Channery sandy loam, Sandy loam	*SC,	*A-2-4, A-1, A-2	0	6-13	82-89	64-82	46-73	21-41	18-36	4-17
	16-18	*Unweathered bedrock			---	---	---	---	---	---	---	---
LoB:												
Lonewood--------	0-20	*Silt loam	*CL, CL-ML, ML	*A-6,	0	0	97-100	78-100	69-100	57-87	24-43	7-18
	20-28	*Silty clay loam	*CL,	*A-6, A-7	0	0-1	91-100	82-100	72-100	63-96	26-45	11-25
	28-55	*Clay loam, Loam	*CL,	*A-7-6, A-7	0	0-1	91-100	81-100	62-99	46-79	27-49	12-28
	55-60	*Weathered bedrock			---	---	---	---	---	---	---	---
	60-65	*Unweathered bedrock			---	---	---	---	---	---	---	---
LoC:												
Lonewood--------	0-20	*Silt loam	*CL, CL-ML, ML	*A-6,	0	0	97-100	78-100	69-100	57-87	24-43	7-18
	20-28	*Silty clay loam	*CL,	*A-6, A-7	0	0-1	91-100	82-100	72-100	63-96	26-45	11-25
	28-55	*Clay loam, Loam	*CL,	*A-7-6, A-7	0	0-1	91-100	81-100	62-99	46-79	27-49	12-28
	55-60	*Weathered bedrock			---	---	---	---	---	---	---	---
	60-65	*Unweathered bedrock			---	---	---	---	---	---	---	---
LP.												
Limestone quarry												

Table 16.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	Percentage passing sieve number--: 10	Percentage passing sieve number--: 40	Percentage passing sieve number--: 200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
Me:												
Melvin----------	0-8	*Silt loam	*CL, CL-ML, ML	*A-4,	0	0	95-100	84-100	81-100	74-93	23-34	7-11
	8-52	*Silt loam, Silty clay loam	*CL, CL-ML	*A-6, A-4	0	0	95-100	85-100	75-100	70-100	22-44	7-25
	52-80	*Silt loam, Silty clay loam, loam	*CL, CL-ML	*A-6, A-4	0	0	87-100	83-100	70-100	65-100	18-44	3-25
MnC:												
Minvale---------	0-5	*Gravelly silt loam	*CL, CL-ML	*A-6,	0	1-5	77-86	59-74	52-73	43-62	26-39	9-17
	5-48	*Gravelly silty clay loam, Gravelly silty clay, gravelly clay, gravelly loam, gravelly clay loam	*CL, SC, GC	*A-6, A-7	0	1-5	74-85	53-75	49-75	43-75	33-57	17-36
	48-62	*Gravelly clay, Very gravelly silty clay loam, very gravelly clay loam, very gravelly clay, very gravelly loam	*CL, SC	*A-7-6,	0	1-5	75-87	54-75	38-75	29-63	29-57	13-36
MoC:												
Montevallo------	0-2	*Channery silt loam	*SC, CL, CL-ML, SC-SM	*A-6,	0	0	82-91	50-74	43-74	34-62	21-39	6-17
	2-15	*Extremely channery silt loam, Very channery silt loam, extremely channery loam	*SC, SC-SM, GC, GC-GM	*A-2-6, A-2	0	22-28	53-64	12-28	10-28	9-26	24-44	9-25
	15-19	*Weathered bedrock			---	---	---	---	---	---	---	---
MoD:												
Montevallo------	0-2	*Channery silt loam	*SC, CL, CL-ML, SC-SM	*A-6,	0	0	82-91	50-74	43-74	34-62	21-39	6-17
	2-15	*Extremely channery silt loam, Very channery silt loam, extremely channery loam	*SC, SC-SM, GC, GC-GM	*A-2-6, A-2	0	22-28	53-64	12-28	10-28	9-26	24-44	9-25
	15-19	*Weathered bedrock			---	---	---	---	---	---	---	---
MoE:												
Montevallo------	0-2	*Channery silt loam	*SC, CL, CL-ML, SC-SM	*A-6,	0	0	82-91	50-74	43-74	34-62	21-39	6-17
	2-15	*Extremely channery silt loam, Very channery silt loam, extremely channery loam	*SC, SC-SM, GC, GC-GM	*A-2-6, A-2	0	22-28	53-64	12-28	10-28	9-26	24-44	9-25
	15-19	*Weathered bedrock			---	---	---	---	---	---	---	---

Table 16.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
Pp:												
Pope------------	0-8	*Loam	*CL, CL-ML, ML, SM	*A-6,	0	0	90-100	78-100	61-98	42-74	20-45	3-18
	8-43	*Loam, Fine sandy loam, sandy loam	*CL, ML, SC-SM, SM	*A-4,	0	0	94-100	80-100	61-99	41-74	16-38	2-19
	43-80	*Very gravelly sandy loam	*SC, SC-SM	*A-2-4, A-1, A-2	0	4-25	73-80	42-55	29-46	13-25	16-32	2-13
Philo-----------	0-36	*Loam	*CL, CL-ML, ML, SM	*A-6,	0	0	96-100	75-100	59-98	40-74	20-45	3-18
	36-48	*Loam, Fine sandy loam, sandy loam	*CL, ML, SM	*A-6,	0	0-3	90-100	80-100	60-97	34-65	16-38	2-19
	48-80	*Gravelly sandy loam	*SC-SM,	*A-2-4, A-2	0	0-6	78-87	56-75	40-63	19-36	16-30	2-12
RaD:												
Ramsey----------	0-4	*Loam	*CL, CL-ML, SC-SM, SM	*A-4,	0	0-6	92-100	84-100	67-97	46-72	20-39	4-17
	4-10	*Fine sandy loam, Sandy loam, gravelly sandy loam	*SC, SC-SM	*A-4, A-2	0	0-6	91-100	83-100	70-100	28-50	18-36	4-17
	10-16	*Channery sandy loam, Sandy loam	*SC,	*A-2-4, A-1, A-2	0	6-13	82-89	64-82	46-73	21-41	18-36	4-17
	16-18	*Unweathered bedrock			---	---	---	---	---	---	---	---
Rock outcrop.												
RaF:												
Ramsey----------	0-4	*Loam	*CL, CL-ML, SC-SM, SM	*A-4,	0	0-6	92-100	84-100	67-97	46-72	20-39	4-17
	4-10	*Fine sandy loam, Sandy loam, gravelly sandy loam	*SC, SC-SM	*A-4, A-2	0	0-6	91-100	83-100	70-100	28-50	18-36	4-17
	10-16	*Channery sandy loam, Sandy loam	*SC,	*A-2-4, A-1, A-2	0	6-13	82-89	64-82	46-73	21-41	18-36	4-17
	16-18	*Unweathered bedrock			---	---	---	---	---	---	---	---
Rock outcrop.												
Sd:												
Shady-----------	0-6	*Loam, Fine sandy loam	*CL, CL-ML, SM	*A-6,	0	0-1	95-100	78-100	63-96	44-71	22-41	6-17
	6-26	*Clay loam, Sandy clay loam, loam	*CL,	*A-6,	0	0-5	91-100	84-100	68-96	52-77	29-44	13-25
	26-38	*Loam, Clay loam, sandy clay loam	*CL,	*A-6,	0	0-3	90-100	79-100	67-99	50-77	29-44	13-25
	38-48	*Gravelly fine sandy loam	*SC, GC-GM, SC-SM, SM	*A-2-4, A-2, A-4	0	0	66-84	53-75	45-75	18-37	16-32	2-13

Table 16.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
SfB:												
Shady-----------	0-6	*Loam, Fine sandy loam	*CL, CL-ML, SM	*A-6,	0	0-1	95-100	78-100	63-96	44-71	22-41	6-17
	6-26	*Clay loam, Sandy clay loam, loam	*CL,	*A-6,	0	0-5	91-100	84-100	68-96	52-77	29-44	13-25
	26-38	*Loam, Clay loam, sandy clay loam	*CL,	*A-6,	0	0-3	90-100	79-100	67-99	50-77	29-44	13-25
	38-48	*Gravelly fine sandy loam	*SC, GC-GM, SC-SM, SM	*A-2-4, A-2, A-4	0	0	66-84	53-75	45-75	18-37	16-32	2-13
Swafford--------	0-12	*Loam, Silt loam	*CL, CL-ML, ML	*A-6,	0	0	89-100	78-100	59-96	40-72	19-45	3-18
	12-26	*Clay loam, Loam, silt loam	*CL, CL-ML	*A-7-6,	0	0	90-100	80-100	60-100	42-89	27-61	12-39
	26-40	*Clay loam, Loam, silty clay loam	*CL,	*A-7-6, A-7	0	0	90-100	81-100	62-99	46-79	27-49	12-28
	40-80	*Clay loam, Loam, fine sandy loam	*CL,	*A-7-6, A-7	0	0	90-100	80-100	61-99	45-79	27-49	12-28
Urban land.												
ShD:												
Shelocta--------	0-10	*Silt loam, Loam	*CL, ML	*A-6,	0	0-1	91-100	80-100	66-100	53-86	19-47	3-18
	10-21	*Silty clay loam, Clay loam	*CL,	*A-6,	0	0-3	90-100	81-100	69-100	61-92	27-44	12-25
	21-65	*Channery silty clay loam, Channery silt loam	*CL, GC	*A-6,	0	7-18	81-91	64-80	56-80	49-79	27-49	12-28
	65-75	*Weathered bedrock			---	---	---	---	---	---	---	---
SwB:												
Swafford--------	0-12	*Loam, Silt loam	*CL, CL-ML, ML	*A-6,	0	0	89-100	78-100	59-96	40-72	19-45	3-18
	12-26	*Clay loam, Loam, silt loam	*CL, CL-ML	*A-7-6,	0	0	90-100	80-100	60-100	42-89	27-61	12-39
	26-40	*Clay loam, Loam, silty clay loam	*CL,	*A-7-6, A-7	0	0	90-100	81-100	62-99	46-79	27-49	12-28
	40-80	*Clay loam, Loam, fine sandy loam	*CL,	*A-7-6, A-7	0	0	90-100	80-100	61-99	45-79	27-49	12-28

Table 16.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	Percentage passing sieve number--: 10	Percentage passing sieve number--: 40	Percentage passing sieve number--: 200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
TaB:												
Tasso-----------	0-9	*Loam, Silt loam	*CL, CL-ML	*A-6,	0	0-3	89-100	78-100	63-96	44-71	21-39	6-17
	9-30	*Clay loam, Silt loam, loam, silty clay loam	*CL,	*A-6,	0	0-5	93-100	81-100	67-98	51-79	29-44	13-25
	30-42	*Gravelly clay, Silty clay loam, clay loam, gravelly silty clay loam	*CL,	*A-7-6,	0	1-5	75-89	58-76	41-74	31-61	29-53	13-32
	42-62	*Clay, Clay loam, silty clay loam, gravelly clay	*CH, CL	*A-7-6, A-6	0	0-16	81-100	63-100	52-97	41-79	39-55	21-32
TaC:												
Tasso-----------	0-9	*Loam, Silt loam	*CL, CL-ML	*A-6,	0	0-3	89-100	78-100	63-96	44-71	21-39	6-17
	9-30	*Clay loam, Silt loam, loam, silty clay loam	*CL,	*A-6,	0	0-5	93-100	81-100	67-98	51-79	29-44	13-25
	30-42	*Gravelly clay, Silty clay loam, clay loam, gravelly silty clay loam	*CL,	*A-7-6,	0	1-5	75-89	58-76	41-74	31-61	29-53	13-32
	42-62	*Clay, Clay loam, silty clay loam, gravelly clay	*CH, CL	*A-7-6, A-6	0	0-16	81-100	63-100	52-97	41-79	39-55	21-32
TeB2:												
Townley---------	0-5	*Silt loam, Loam	*CL, CL-ML	*A-6,	0	0	89-100	77-100	66-100	54-86	21-41	6-19
	5-24	*Clay, Silty clay loam, silty clay	*CH,	*A-7-6,	0	0	89-100	77-100	57-100	48-92	39-68	21-44
	24-28	*Silty clay loam, Silty clay, clay	*CL,	*A-7-6,	0	0	89-100	77-100	74-100	66-100	39-67	21-44
	28-44	*Weathered bedrock			---	---	---	---	---	---	---	---
Coile-----------	0-3	*Silt loam, Loam	*CL, CL-ML, ML	*A-6, A-4	0	0-5	89-94	70-90	57-90	46-80	19-43	3-21
	3-10	*Very channery silt loam, Channery clay, channery loam	*GC, SC, CL, GC-GM	*A-2-6, A-2	0	0	60-81	26-73	22-73	19-73	25-57	9-36
	10-18	*Channery clay, Very channery loam, very channery clay loam	*CH, SC, CL	*A-7-6, A-2	0	0-3	74-85	51-73	34-73	25-61	25-57	9-36
	18-24	*Weathered bedrock			---	---	---	---	---	---	---	---

Table 16.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas-ticity index
	In				Pct	Pct					Pct	
TeC:												
Townley---------	0-8	*Silt loam	*CL, CL-ML	*A-6,	0	0-7	91-100	82-100	70-100	57-86	21-41	6-19
	8-20	*Silty clay loam	*CL, CH	*A-7-6,	0	0-1	87-100	78-100	75-100	72-100	38-50	20-28
	20-30	*Silty clay, Silty clay loam, clay	*CH, CL	*A-7-6,	0	0-1	87-100	78-100	68-100	65-100	43-67	25-44
	30-36	*Channery silty clay loam, Channery silty clay	*CL, CH	*A-7-6,	0	0-15	84-90	59-74	57-74	55-74	45-56	26-34
	36-46	*Weathered bedrock			---	---	---	---	---	---	---	---
TeD:												
Townley---------	0-8	*Silt loam	*CL, CL-ML	*A-6,	0	0-7	91-100	82-100	70-100	57-86	21-41	6-19
	8-20	*Silty clay loam	*CL, CH	*A-7-6,	0	0-1	87-100	78-100	75-100	72-100	38-50	20-28
	20-30	*Silty clay, Silty clay loam, clay	*CH, CL	*A-7-6,	0	0-1	87-100	78-100	68-100	65-100	43-67	25-44
	30-36	*Channery silty clay loam, Channery silty clay	*CL, CH	*A-7-6,	0	0-15	84-90	59-74	57-74	55-74	45-56	26-34
	36-46	*Weathered bedrock			---	---	---	---	---	---	---	---
TeE:												
Townley---------	0-8	*Silt loam	*CL, CL-ML	*A-6,	0	0-7	91-100	82-100	70-100	57-86	21-41	6-19
	8-20	*Silty clay loam	*CL, CH	*A-7-6,	0	0-1	87-100	78-100	75-100	72-100	38-50	20-28
	20-30	*Silty clay, Silty clay loam, clay	*CH, CL	*A-7-6,	0	0-1	87-100	78-100	68-100	65-100	43-67	25-44
	30-36	*Channery silty clay loam, Channery silty clay	*CL, CH	*A-7-6,	0	0-15	84-90	59-74	57-74	55-74	45-56	26-34
	36-46	*Weathered bedrock			---	---	---	---	---	---	---	---
TuD:												
Townley---------	0-8	*Silt loam	*CL, CL-ML	*A-6,	0	0-7	91-100	82-100	70-100	57-86	21-41	6-19
	8-20	*Silty clay loam	*CL, CH	*A-7-6,	0	0-1	87-100	78-100	75-100	72-100	38-50	20-28
	20-30	*Silty clay, Silty clay loam, clay	*CH, CL	*A-7-6,	0	0-1	87-100	78-100	68-100	65-100	43-67	25-44
	30-36	*Channery silty clay loam, Channery silty clay	*CL, CH	*A-7-6,	0	0-15	84-90	59-74	57-74	55-74	45-56	26-34
	36-46	*Weathered bedrock			---	---	---	---	---	---	---	---

Table 16.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
TuD:												
Armuchee--------	0-6	*Silt loam	*CL,	*A-6,	0	0-3	90-100	79-100	73-100	65-92	32-45	15-22
	6-11	*Channery silty clay loam, Channery silty clay	*CL, CH	*A-7-6,	0	0-3	80-90	58-74	56-74	54-74	45-56	26-34
	11-21	*Very channery silty clay, Very channery silty clay loam	*SC, GC	*A-7-6, A-2	0	0-8	72-77	38-49	36-49	34-49	43-55	25-32
	21-40	*Weathered bedrock			---	---	---	---	---	---	---	---
Urban land.												
TuE:												
Townley---------	0-8	*Silt loam	*CL, CL-ML	*A-6,	0	0-7	91-100	82-100	70-100	57-86	21-41	6-19
	8-20	*Silty clay loam	*CL, CH	*A-7-6,	0	0-1	87-100	78-100	75-100	72-100	38-50	20-28
	20-30	*Silty clay, Silty clay loam, clay	*CH, CL	*A-7-6,	0	0-1	87-100	78-100	68-100	65-100	43-67	25-44
	30-36	*Channery silty clay loam, Channery silty clay	*CL, CH	*A-7-6,	0	0-15	84-90	59-74	57-74	55-74	45-56	26-34
	36-46	*Weathered bedrock			---	---	---	---	---	---	---	---
Armuchee--------	0-6	*Silt loam	*CL,	*A-6,	0	0-3	90-100	79-100	73-100	65-92	32-45	15-22
	6-11	*Channery silty clay loam, Channery silty clay	*CL, CH	*A-7-6,	0	0-3	80-90	58-74	56-74	54-74	45-56	26-34
	11-21	*Very channery silty clay, Very channery silty clay loam	*SC, GC	*A-7-6, A-2	0	0-8	72-77	38-49	36-49	34-49	43-55	25-32
	21-40	*Weathered bedrock			---	---	---	---	---	---	---	---
Urban land.												
UrD. Urban land												
W. Water												
WaB:												
Waynesboro------	0-6	*Loam	*CL, CL-ML	*A-6,	0	0	90-100	80-100	63-94	44-70	21-39	6-17
	6-11	*Loam, Clay loam, sandy clay loam	*CL, SC	*A-6, A-4, A-7	0	0-10	96-100	86-100	65-100	47-80	21-45	6-25
	11-35	*Clay loam, Silty clay loam, clay	*CL,	*A-7-6, A-7	0	0	88-100	77-100	57-99	43-79	27-50	12-30
	35-60	*Clay, Clay loam, sandy clay	*CH,	*A-7-6,	0	0-3	90-100	80-100	69-100	55-84	42-57	24-36

Table 16.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas-ticity index
	In				Pct	Pct					Pct	
WaC:												
Waynesboro------	0-6	*Loam	*CL, CL-ML	*A-6,	0	0	90-100	80-100	63-94	44-70	21-39	6-17
	6-11	*Loam, Clay loam, sandy clay loam	*CL, SC	*A-6, A-4, A-7	0	0-10	96-100	86-100	65-100	47-80	21-45	6-25
	11-35	*Clay loam, Silty clay loam, clay	*CL,	*A-7-6, A-7	0	0	88-100	77-100	57-99	43-79	27-50	12-30
	35-60	*Clay, Clay loam, sandy clay	*CH,	*A-7-6,	0	0-3	90-100	80-100	69-100	55-84	42-57	24-36
WaD:												
Waynesboro------	0-6	*Loam	*CL, CL-ML	*A-6,	0	0	90-100	80-100	63-94	44-70	21-39	6-17
	6-11	*Loam, Clay loam, sandy clay loam	*CL, SC	*A-6, A-4, A-7	0	0-10	96-100	86-100	65-100	47-80	21-45	6-25
	11-35	*Clay loam, Silty clay loam, clay	*CL,	*A-7-6, A-7	0	0	88-100	77-100	57-99	43-79	27-50	12-30
	35-60	*Clay, Clay loam, sandy clay	*CH,	*A-7-6,	0	0-3	90-100	80-100	69-100	55-84	42-57	24-36
WeD:												
Waynesboro------	0-6	*Loam	*CL, CL-ML	*A-6,	0	0	90-100	80-100	63-94	44-70	21-39	6-17
	6-11	*Loam, Clay loam, sandy clay loam	*CL, SC	*A-6, A-4, A-7	0	0-10	96-100	86-100	65-100	47-80	21-45	6-25
	11-35	*Clay loam, Silty clay loam, clay	*CL,	*A-7-6, A-7	0	0	88-100	77-100	57-99	43-79	27-50	12-30
	35-60	*Clay, Clay loam, sandy clay	*CH,	*A-7-6,	0	0-3	90-100	80-100	69-100	55-84	42-57	24-36
Etowah----------	0-12	*Silt loam, Loam	*CL, CL-ML, ML, SC-SM	*A-4,	0	0	82-100	75-100	63-100	48-81	21-41	4-17
	12-27	*Loam, Silty clay loam, clay loam, silt loam	*CL,	*A-6,	0	0	83-100	76-100	63-100	46-78	27-44	12-25
	27-60	*Clay loam, Silty clay loam, clay	*CL,	*A-7-6, A-7	0	0	83-100	77-100	57-99	43-79	27-50	12-30
Urban land.												
WhB:												
Whitwell--------	0-10	*Loam	*CL, CL-ML, ML	*A-6,	0	0-10	96-100	85-100	69-96	48-71	22-41	6-17
	10-38	*Clay loam, Loam, silt loam	*CL,	*A-6,	0	0-10	96-100	86-100	69-100	52-83	27-50	12-28
	38-80	*Loam, Clay loam, silt loam	*CL,	*A-6,	0	0-10	96-100	86-100	71-97	52-75	27-43	12-22

Table 17.—Physical Soil Properties

(Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer. Absence of an entry indicates that data were not estimated)

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors Kw	Kf	T	Wind erodibility group
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct				
AeC:													
Allen----------------	0-3	-44-	-40-	10-16- 25	1.30-1.50	4.23-14.11	0.14-0.19	0.0-2.9	0.5-3.0	.28	.28	5	8
	3-28	-34-	-36-	18-30- 35	1.40-1.60	4.23-14.11	0.12-0.17	0.0-2.9	0.0-0.5	.20	.20		
	28-70	-33-	-31-	27-36- 45	1.35-1.55	4.00-14.00	0.08-0.15	0.0-2.9	0.0-0.5	.28	.32		
AeD:													
Allen----------------	0-3	-44-	-40-	10-16- 25	1.30-1.50	4.23-14.11	0.14-0.19	0.0-2.9	0.5-3.0	.28	.28	5	8
	3-28	-34-	-36-	18-30- 35	1.40-1.60	4.23-14.11	0.12-0.17	0.0-2.9	0.0-0.5	.20	.20		
	28-70	-33-	-31-	27-36- 45	1.35-1.55	4.00-14.00	0.08-0.15	0.0-2.9	0.0-0.5	.28	.32		
AfD:													
Allen----------------	0-3	-44-	-40-	10-16- 25	1.30-1.50	4.23-14.11	0.14-0.19	0.0-2.9	0.5-3.0	.28	.28	5	8
	3-28	-34-	-36-	18-30- 35	1.40-1.60	4.23-14.11	0.12-0.17	0.0-2.9	0.0-0.5	.20	.20		
	28-70	-33-	-31-	27-36- 45	1.35-1.55	4.00-14.00	0.08-0.15	0.0-2.9	0.0-0.5	.28	.32		
Jefferson------------	0-11	-42-	-38-	7-20- 25	1.20-1.40	4.23-42.34	0.13-0.18	0.0-2.9	0.5-4.0	.28	.37	5	8
	11-35	-35-	-35-	18-30- 34	1.40-1.55	4.23-14.11	0.14-0.17	0.0-2.9	0.1-0.5	.32	.32		
	35-48	-38-	-36-	18-26- 34	1.30-1.65	14.00-42.00	0.10-0.16	0.0-2.9	0.0-0.5	.28	.32		
	48-58	-67-	-20-	5-12- 20	1.40-1.70	14.11-42.33	0.07-0.20	0.0-2.9	0.0-0.5	.20	.20		
Urban land.													
AmC:													
Armuchee-------------	0-6	-19-	-55-	22-26- 32	1.35-1.45	4.23-14.11	0.15-0.20	0.0-2.9	0.5-2.0	.37	.32	3	8
	6-11	- 8-	-54-	37-38- 47	1.40-1.50	1.41-4.23	0.10-0.14	3.0-5.9	0.0-0.5	.28	.37		
	11-21	- 8-	-52-	35-40- 45	1.40-1.50	1.41-4.23	0.05-0.10	3.0-5.9	0.0-0.5	.28	.32		
	21-40	--	--	--	---	---	---	---	---	---	---		
AmD:													
Armuchee-------------	0-6	-19-	-55-	22-26- 32	1.35-1.45	4.23-14.11	0.15-0.20	0.0-2.9	0.5-2.0	.37	.32	3	8
	6-11	- 8-	-54-	37-38- 47	1.40-1.50	1.41-4.23	0.10-0.14	3.0-5.9	0.0-0.5	.28	.37		
	11-21	- 8-	-52-	35-40- 45	1.40-1.50	1.41-4.23	0.05-0.10	3.0-5.9	0.0-0.5	.28	.32		
	21-40	--	--	--	---	---	---	---	---	---	---		
AmE:													
Armuchee-------------	0-6	-19-	-55-	22-26- 32	1.35-1.45	4.23-14.11	0.15-0.20	0.0-2.9	0.5-2.0	.37	.32	3	8
	6-11	- 8-	-54-	37-38- 47	1.40-1.50	1.41-4.23	0.10-0.14	3.0-5.9	0.0-0.5	.28	.37		
	11-21	- 8-	-52-	35-40- 45	1.40-1.50	1.41-4.23	0.05-0.10	3.0-5.9	0.0-0.5	.28	.32		
	21-40	--	--	--	---	---	---	---	---	---	---		
ANS.													
Area not surveyed													

Table 17.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct				
ApC:													
Apison---------------	0-3	-43-	-38-	12-18- 27	1.30-1.45	4.23-14.11	0.15-0.20	0.0-2.9	1.0-3.0	.37	.37	3	8
	3-22	-34-	-38-	20-28- 35	1.35-1.50	4.23-14.11	0.13-0.18	0.0-2.9	0.0-0.5	.37	.37		
	22-60	--	--	--	---	---	---	---	---	---	---		
Sunlight-------------	0-3	-66-	-15-	10-18- 27	1.40-1.60	4.23-14.11	0.08-0.14	0.0-2.9	1.0-2.0	.24	.28	2	8
	3-13	-38-	-36-	18-26- 35	1.50-1.70	4.23-14.11	0.10-0.18	0.0-2.9	0.0-0.5	.17	.28		
	13-20	--	--	--	---	---	---	---	---	---	---		
ApF:													
Apison---------------	0-3	-43-	-38-	12-18- 27	1.30-1.45	4.23-14.11	0.15-0.20	0.0-2.9	1.0-3.0	.37	.37	3	8
	3-22	-34-	-38-	20-28- 35	1.35-1.50	4.23-14.11	0.13-0.18	0.0-2.9	0.0-0.5	.37	.37		
	22-60	--	--	--	---	---	---	---	---	---	---		
Sunlight-------------	0-3	-66-	-15-	10-18- 27	1.40-1.60	4.23-14.11	0.08-0.14	0.0-2.9	1.0-2.0	.24	.28	2	8
	3-13	-38-	-36-	18-26- 35	1.50-1.70	4.23-14.11	0.10-0.18	0.0-2.9	0.0-0.5	.17	.28		
	13-20	--	--	--	---	---	---	---	---	---	---		
ASD.													
Ash disposal area													
BeF:													
Bethesda-------------	0-23	-40-	-38-	18-22- 27	1.40-1.55	4.23-14.11	0.10-0.16	0.0-2.9	0.0-0.5	.28	.49	5	8
	23-46	-36-	-36-	18-29- 35	1.60-1.90	1.41-4.23	0.04-0.10	0.0-2.9	0.0-0.5	.32	.64		
	46-60	-41-	-37-	7-22- 40	1.60-1.90	1.41-4.23	0.04-0.10	0.0-2.9	0.0-0.5	.32	.64		
Mines pit.													
Bg:													
Bloomingdale---------	0-9	-19-	-52-	18-29- 30	1.10-1.30	4.23-14.11	0.17-0.22	0.0-2.9	1.0-3.0	.37	.37	5	8
	9-80	- 6-	-47-	35-48- 60	1.30-1.50	4.23-14.11	0.17-0.22	3.0-5.9	0.5-1.0	.37	.37		
BrE:													
Bradyville-----------	0-6	-30-	-56-	8-14- 20	1.35-1.55	14.11-42.34	0.07-0.12	0.0-2.9	0.5-2.0	.20	.32	3	8
	6-44	-22-	-28-	40-50- 60	1.30-1.50	1.41-4.23	0.10-0.15	3.0-5.9	0.0-0.5	.28	.28		
	44-48	--	--	--	---	---	---	---	---	---	---		
Rock outcrop.													
CaB:													
Capshaw--------------	0-4	-26-	-53-	15-21- 27	1.35-1.50	4.00-14.00	0.18-0.22	0.0-2.9	1.0-3.0	.37	.37	3	8
	4-24	-17-	-48-	25-35- 45	1.35-1.55	4.00-14.00	0.16-0.20	0.0-2.9	0.0-0.5	.37	.37		
	24-36	-26-	-29-	35-45- 55	1.40-1.55	0.42-1.40	0.12-0.18	3.0-5.9	0.0-0.5	.37	.37		
	36-72	- 6-	-47-	35-48- 60	1.30-1.50	4.23-14.11	0.17-0.22	3.0-5.9	0.0-0.5	.37	.37		
	72-76	--	--	--	---	---	---	---	---	---	---		

Table 17.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors Kw	Kf	T	Wind erodibility group
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct				
CbD:													
Colbert	0-9	-20-	-54-	5-26- 27	1.30-1.55	4.23-14.11	0.15-0.22	0.0-2.9	0.5-2.0	.37	.37	3	8
	9-58	-12-	-29-	50-59- 70	1.00-1.30	0.00-0.42	0.12-0.16	6.0-8.9	0.0-0.5	.32	.32		
	58-60	--	--	--	---	---	---	---	---	---	---		
Lyerly	0-5	-24-	-51-	15-25- 35	1.20-1.50	1.40-14.00	0.16-0.24	3.0-5.9	0.5-2.0	.43	.43	2	8
	5-10	-17-	-50-	27-33- 45	1.20-1.60	0.42-1.41	0.14-0.20	6.0-8.9	0.5-1.0	.32	.32		
	10-38	-10-	-23-	60-68- 75	1.35-1.55	0.01-0.42	0.10-0.16	6.0-8.9	0.0-0.5	.32	.32		
	38-40	--	--	--	---	---	---	---	---	---	---		
Rock outcrop.													
CoC:													
Collegedale	0-5	-21-	-55-	14-24- 26	1.30-1.50	4.23-14.11	0.18-0.22	0.0-2.9	1.0-2.0	.37	.37	5	8
	5-80	- 5-	-45-	35-50- 60	1.45-1.60	1.41-4.23	0.12-0.16	3.0-5.9	0.0-0.5	.24	.24		
CoD:													
Collegedale	0-5	-21-	-55-	14-24- 26	1.30-1.50	4.23-14.11	0.18-0.22	0.0-2.9	1.0-2.0	.37	.37	5	8
	5-80	- 5-	-45-	35-50- 60	1.45-1.60	1.41-4.23	0.12-0.16	3.0-5.9	0.0-0.5	.24	.24		
DeB:													
Dewey	0-7	-26-	-53-	15-21- 27	1.25-1.55	4.00-14.00	0.18-0.20	0.0-2.9	0.5-2.0	.32	.32	5	8
	7-27	- 6-	-55-	35-39- 60	1.20-1.55	4.00-14.00	0.14-0.17	3.0-5.9	0.0-0.5	.28	.28		
	27-80	- 3-	-45-	45-52- 60	1.45-1.55	4.23-14.11	0.12-0.17	3.0-5.9	0.0-0.5	.24	.24		
DeC:													
Dewey	0-7	-26-	-53-	15-21- 27	1.25-1.55	4.00-14.00	0.18-0.20	0.0-2.9	0.5-2.0	.32	.32	5	8
	7-27	- 6-	-55-	35-39- 60	1.20-1.55	4.00-14.00	0.14-0.17	3.0-5.9	0.0-0.5	.28	.28		
	27-80	- 3-	-45-	45-52- 60	1.45-1.55	4.23-14.11	0.12-0.17	3.0-5.9	0.0-0.5	.24	.24		
DeD:													
Dewey	0-7	-26-	-53-	15-21- 27	1.25-1.55	4.00-14.00	0.18-0.20	0.0-2.9	0.5-2.0	.32	.32	5	8
	7-27	- 6-	-55-	35-39- 60	1.20-1.55	4.00-14.00	0.14-0.17	3.0-5.9	0.0-0.5	.28	.28		
	27-80	- 3-	-45-	45-52- 60	1.45-1.55	4.23-14.11	0.12-0.17	3.0-5.9	0.0-0.5	.24	.24		
DeE:													
Dewey	0-7	-26-	-53-	15-21- 27	1.25-1.55	4.00-14.00	0.18-0.20	0.0-2.9	0.5-2.0	.32	.32	5	8
	7-27	- 6-	-55-	35-39- 60	1.20-1.55	4.00-14.00	0.14-0.17	3.0-5.9	0.0-0.5	.28	.28		
	27-80	- 3-	-45-	45-52- 60	1.45-1.55	4.23-14.11	0.12-0.17	3.0-5.9	0.0-0.5	.24	.24		
EcB:													
Ealy	0-10	-65-	-20-	5-15- 18	1.40-1.60	14.11-42.34	0.14-0.18	0.0-2.9	1.0-3.0	.32	.32	5	8
	10-80	-69-	-16-	5-15- 18	1.40-1.65	14.11-42.34	0.12-0.18	0.0-2.9	0.5-1.0	.32	.32		
Craigsville	0-3	-68-	-20-	5-12- 15	1.20-1.40	14.11-141.14	0.07-0.15	0.0-2.9	1.0-3.0	.20	.24	3	8
	3-21	-68-	-20-	5-12- 15	1.30-1.60	14.11-141.14	0.06-0.15	0.0-2.9	0.0-0.5	.17	.28		
	21-80	-83-	- 9-	5- 8- 10	1.35-1.55	42.34-141.14	0.04-0.09	0.0-2.9	0.0-0.5	.17	.28		

Table 17.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct				
EtB:													
Etowah---------------	0-12	-41-	-45-	8-14- 25	1.30-1.45	4.23-14.11	0.15-0.20	0.0-2.9	1.0-3.0	.37	.37	5	8
	12-27	-38-	-36-	18-25- 35	1.35-1.50	4.23-14.11	0.16-0.20	0.0-2.9	0.0-0.5	.32	.32		
	27-80	-33-	-32-	18-35- 42	1.40-1.55	4.23-14.11	0.16-0.20	0.0-2.9	0.0-0.5	.32	.32		
EtC:													
Etowah---------------	0-12	-35-	-51-	8-14- 25	1.30-1.45	4.23-14.11	0.15-0.20	0.0-2.9	1.0-3.0	.37	.37	5	8
	12-27	-38-	-36-	18-25- 35	1.35-1.50	4.23-14.11	0.16-0.20	0.0-2.9	0.0-0.5	.32	.32		
	27-80	-33-	-32-	18-35- 42	1.40-1.55	4.23-14.11	0.16-0.20	0.0-2.9	0.0-0.5	.32	.32		
FuB:													
Fullerton------------	0-7	-26-	-53-	15-21- 27	1.45-1.55	4.23-14.11	0.10-0.16	0.0-2.9	0.5-2.0	.28	.32	5	8
	7-70	-17-	-28-	40-55- 70	1.45-1.55	4.23-14.11	0.10-0.14	3.0-5.9	0.0-0.5	.20	.24		
Pailo----------------	0-15	-30-	-56-	8-14- 20	1.35-1.55	14.11-42.34	0.07-0.12	0.0-2.9	1.0-2.0	.20	.32	5	8
	15-40	-18-	-53-	20-29- 35	1.40-1.60	14.11-42.34	0.05-0.10	0.0-2.9	0.0-0.5	.15	.28		
	40-80	-28-	-30-	20-42- 50	1.40-1.60	14.11-42.34	0.05-0.10	0.0-2.9	0.0-0.5	.15	.28		
FuC:													
Fullerton------------	0-7	-26-	-53-	15-21- 27	1.45-1.55	4.23-14.11	0.10-0.16	0.0-2.9	0.5-2.0	.28	.32	5	8
	7-70	-17-	-28-	40-55- 70	1.45-1.55	4.23-14.11	0.10-0.14	3.0-5.9	0.0-0.5	.20	.24		
Pailo----------------	0-15	-30-	-56-	8-14- 20	1.35-1.55	14.11-42.34	0.07-0.12	0.0-2.9	1.0-2.0	.20	.32	5	8
	15-40	-18-	-53-	20-29- 35	1.40-1.60	14.11-42.34	0.05-0.10	0.0-2.9	0.0-0.5	.15	.28		
	40-80	-28-	-30-	20-42- 50	1.40-1.60	14.11-42.34	0.05-0.10	0.0-2.9	0.0-0.5	.15	.28		
FuD:													
Fullerton------------	0-7	-26-	-53-	15-21- 27	1.45-1.55	4.23-14.11	0.10-0.16	0.0-2.9	0.5-2.0	.28	.32	5	8
	7-70	-17-	-28-	40-55- 70	1.45-1.55	4.23-14.11	0.10-0.14	3.0-5.9	0.0-0.5	.20	.24		
Pailo----------------	0-15	-30-	-56-	8-14- 20	1.35-1.55	14.11-42.34	0.07-0.12	0.0-2.9	1.0-2.0	.20	.32	5	8
	15-40	-18-	-53-	20-29- 35	1.40-1.60	14.11-42.34	0.05-0.10	0.0-2.9	0.0-0.5	.15	.28		
	40-80	-28-	-30-	20-42- 50	1.40-1.60	14.11-42.34	0.05-0.10	0.0-2.9	0.0-0.5	.15	.28		
FuE:													
Fullerton------------	0-7	-26-	-53-	15-21- 27	1.45-1.55	4.23-14.11	0.10-0.16	0.0-2.9	0.5-2.0	.28	.32	5	8
	7-70	-17-	-28-	40-55- 70	1.45-1.55	4.23-14.11	0.10-0.14	3.0-5.9	0.0-0.5	.20	.24		
Pailo----------------	0-15	-30-	-56-	8-14- 20	1.35-1.55	14.11-42.34	0.07-0.12	0.0-2.9	1.0-2.0	.20	.32	5	8
	15-40	-18-	-53-	20-29- 35	1.40-1.60	14.11-42.34	0.05-0.10	0.0-2.9	0.0-0.5	.15	.28		
	40-80	-28-	-30-	20-42- 50	1.40-1.60	14.11-42.34	0.05-0.10	0.0-2.9	0.0-0.5	.15	.28		
FwD:													
Fullerton------------	0-7	-26-	-53-	15-21- 27	1.45-1.55	4.23-14.11	0.10-0.16	0.0-2.9	0.5-2.0	.28	.32	5	8
	7-70	-17-	-28-	40-55- 70	1.45-1.55	4.23-14.11	0.10-0.14	3.0-5.9	0.0-0.5	.20	.24		

Table 17.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct				
FwD:													
Dewey----------------	0-7	-26-	-53-	15-21- 27	1.25-1.55	4.00-14.00	0.18-0.20	0.0-2.9	0.5-2.0	.32	.32	5	8
	7-27	- 6-	-55-	35-39- 60	1.20-1.55	4.00-14.00	0.14-0.17	3.0-5.9	0.0-0.5	.28	.28		
	27-80	- 3-	-45-	45-52- 60	1.45-1.55	4.23-14.11	0.12-0.17	3.0-5.9	0.0-0.5	.24	.24		
Urban land.													
FwE:													
Fullerton------------	0-7	-26-	-53-	15-21- 27	1.45-1.55	4.23-14.11	0.10-0.16	0.0-2.9	0.5-2.0	.28	.32	5	8
	7-70	-17-	-28-	40-55- 70	1.45-1.55	4.23-14.11	0.10-0.14	3.0-5.9	0.0-0.5	.20	.24		
Dewey----------------	0-7	-26-	-53-	15-21- 27	1.25-1.55	4.00-14.00	0.18-0.20	0.0-2.9	0.5-2.0	.32	.32	5	8
	7-27	- 6-	-55-	35-39- 60	1.20-1.55	4.00-14.00	0.14-0.17	3.0-5.9	0.0-0.5	.28	.28		
	27-80	- 3-	-45-	45-52- 60	1.45-1.55	4.23-14.11	0.12-0.17	3.0-5.9	0.0-0.5	.24	.24		
Urban land.													
GnD:													
Gilpin---------------	0-6	-26-	-53-	12-21- 27	1.20-1.40	4.23-14.11	0.12-0.18	0.0-2.9	0.5-4.0	.32	.32	3	8
	6-21	-18-	-51-	18-31- 35	1.40-1.60	4.23-14.11	0.12-0.18	0.0-2.9	0.0-1.0	.24	.28		
	21-25	-20-	-52-	18-28- 40	1.20-1.50	4.00-14.00	0.12-0.16	0.0-2.9	0.0-0.5	.24	.32		
	25-35	--	--	--	---	---	---	---	---	---	---		
GpE:													
Gilpin---------------	0-6	-26-	-53-	12-21- 27	1.20-1.40	4.23-14.11	0.12-0.18	0.0-2.9	0.5-4.0	.32	.32	3	8
	6-21	-18-	-51-	18-31- 35	1.40-1.60	4.23-14.11	0.12-0.18	0.0-2.9	0.0-1.0	.24	.28		
	21-25	-20-	-52-	18-28- 40	1.20-1.50	4.00-14.00	0.12-0.16	0.0-2.9	0.0-0.5	.24	.32		
	25-35	--	--	--	---	---	---	---	---	---	---		
Petros---------------	0-2	-27-	-55-	12-18- 27	1.30-1.50	4.23-42.34	0.10-0.14	0.0-2.9	0.5-2.0	.20	.28	2	8
	2-8	-27-	-55-	12-18- 27	1.30-1.55	4.23-42.34	0.04-0.09	0.0-2.9	0.0-1.0	.15	.24		
	8-16	-27-	-55-	12-18- 27	1.30-1.55	4.23-42.34	0.04-0.09	0.0-2.9	0.0-0.5	.15	.24		
	16-18	--	--	--	---	---	---	---	---	---	---		
GpF:													
Gilpin---------------	0-6	-26-	-53-	12-21- 27	1.20-1.40	4.23-14.11	0.12-0.18	0.0-2.9	0.5-4.0	.32	.32	3	8
	6-21	-18-	-51-	18-31- 35	1.40-1.60	4.23-14.11	0.12-0.18	0.0-2.9	0.0-1.0	.24	.28		
	21-25	-20-	-52-	18-28- 40	1.20-1.50	4.00-14.00	0.12-0.16	0.0-2.9	0.0-0.5	.24	.32		
	25-35	--	--	--	---	---	---	---	---	---	---		
Petros---------------	0-2	-27-	-55-	12-18- 27	1.30-1.50	4.23-42.34	0.10-0.14	0.0-2.9	0.5-2.0	.20	.28	2	8
	2-8	-27-	-55-	12-18- 27	1.30-1.55	4.23-42.34	0.04-0.09	0.0-2.9	0.0-1.0	.15	.24		
	8-16	-27-	-55-	12-18- 27	1.30-1.55	4.23-42.34	0.04-0.09	0.0-2.9	0.0-0.5	.15	.24		
	16-18	--	--	--	---	---	---	---	---	---	---		

Table 17.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodi-bility group
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct				
GsF:													
Gilpin---------------	0-6	-26-	-53-	12-21- 27	1.20-1.40	4.23-14.11	0.12-0.18	0.0-2.9	0.5-4.0	.32	.32	3	8
	6-21	-18-	-51-	18-31- 35	1.40-1.60	4.23-14.11	0.12-0.18	0.0-2.9	0.0-1.0	.24	.28		
	21-25	-20-	-52-	18-28- 40	1.20-1.50	4.00-14.00	0.12-0.16	0.0-2.9	0.0-0.5	.24	.32		
	25-35	--	--	--	---	---	---	---	---	---	---		
Bouldin--------------	0-2	-44-	-40-	7-16- 27	1.35-1.50	14.11-42.34	0.06-0.10	0.0-2.9	1.0-3.0	.20	.28	5	8
	2-17	23-42- 52	28-39- 50	7-19- 27	1.35-1.50	14.11-42.34	0.06-0.10	0.0-2.9	0.5-2.0	.20	.28		
	17-30	23-42- 52	28-39- 50	7-19- 27	1.35-1.50	14.11-42.34	0.06-0.10	0.0-2.9	0.5-2.0	.20	.28		
	30-80	20-34- 52	28-36- 50	7-30- 35	1.40-1.55	14.11-42.34	0.06-0.10	0.0-2.9	0.0-0.5	.20	.28		
Petros---------------	0-2	-27-	-55-	12-18- 27	1.30-1.50	4.23-42.34	0.10-0.14	0.0-2.9	0.5-2.0	.20	.28	2	8
	2-8	-27-	-55-	12-18- 27	1.30-1.55	4.23-42.34	0.04-0.09	0.0-2.9	0.0-1.0	.15	.24		
	8-16	-27-	-55-	12-18- 27	1.30-1.55	4.23-42.34	0.04-0.09	0.0-2.9	0.0-0.5	.15	.24		
	16-18	--	--	--	---	---	---	---	---	---	---		
Ha:													
Hamblen--------------	0-5	-26-	-54-	15-20- 25	1.30-1.45	4.23-14.11	0.18-0.20	0.0-2.9	1.0-3.0	.32	.32	5	8
	5-43	-20-	-54-	18-25- 32	1.30-1.45	4.23-14.11	0.17-0.20	0.0-2.9	0.2-1.0	.32	.32		
	43-62	-38-	-36-	20-26- 35	1.35-1.55	4.23-14.11	0.14-0.20	0.0-2.9	0.1-1.0	.28	.28		
HeB:													
Hendon---------------	0-2	-27-	-54-	12-18- 25	1.30-1.45	4.23-14.11	0.17-0.21	0.0-2.9	1.0-3.0	.37	.37	5	8
	2-9	-27-	-54-	12-18- 25	1.30-1.45	4.23-14.11	0.17-0.21	0.0-2.9	0.1-0.5	.37	.37		
	9-22	-17-	-48-	7-35- 40	1.40-1.55	4.23-14.11	0.14-0.17	0.0-2.9	0.0-0.5	.32	.32		
	22-30	-35-	-33-	18-32- 40	1.40-1.67	4.23-14.11	0.14-0.17	0.0-2.9	0.0-0.5	.32	.32		
	30-80	-35-	-33-	18-32- 40	1.40-1.60	4.23-14.11	0.14-0.17	0.0-2.9	0.0-0.5	.32	.32		
HeC:													
Hendon---------------	0-2	-27-	-54-	12-18- 25	1.30-1.45	4.23-14.11	0.17-0.21	0.0-2.9	1.0-3.0	.37	.37	5	8
	2-9	-27-	-54-	12-18- 25	1.30-1.45	4.23-14.11	0.17-0.21	0.0-2.9	0.1-0.5	.37	.37		
	9-22	-17-	-48-	7-35- 40	1.40-1.55	4.23-14.11	0.14-0.17	0.0-2.9	0.0-0.5	.32	.32		
	22-30	-35-	-33-	18-32- 40	1.40-1.67	4.23-14.11	0.14-0.17	0.0-2.9	0.0-0.5	.32	.32		
	30-80	-35-	-33-	18-32- 40	1.40-1.60	4.23-14.11	0.14-0.17	0.0-2.9	0.0-0.5	.32	.32		
JeC:													
Jefferson------------	0-11	-42-	-38-	7-20- 25	1.20-1.40	4.23-42.34	0.13-0.18	0.0-2.9	0.5-4.0	.28	.37	5	8
	11-35	-35-	-35-	18-30- 34	1.40-1.55	4.23-14.11	0.14-0.17	0.0-2.9	0.1-0.5	.32	.32		
	35-48	-38-	-36-	18-26- 34	1.30-1.65	14.00-42.00	0.10-0.16	0.0-2.9	0.0-0.5	.28	.32		
	48-58	-67-	-20-	5-12- 20	1.40-1.70	14.11-42.33	0.07-0.20	0.0-2.9	0.0-0.5	.20	.20		
JeE:													
Jefferson------------	0-11	-42-	-38-	7-20- 25	1.20-1.40	4.23-42.34	0.13-0.18	0.0-2.9	0.5-4.0	.28	.37	4	8
	11-35	-35-	-35-	18-30- 34	1.40-1.55	4.23-14.11	0.14-0.17	0.0-2.9	0.1-0.5	.32	.32		
	35-48	-38-	-36-	18-26- 34	1.30-1.65	14.00-42.00	0.10-0.16	0.0-2.9	0.0-0.5	.28	.32		
	48-58	-67-	-20-	5-12- 20	1.40-1.70	14.11-42.33	0.07-0.20	0.0-2.9	0.0-0.5	.20	.20		

Table 17.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodi-bility group
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct				
JnD:													
Jefferson------------	0-7	-43-	-39-	10-18- 25	1.30-1.50	14.11-42.34	0.10-0.16	0.0-2.9	0.5-5.0	.17	.28	5	8
	7-40	-38-	-36-	18-26- 34	1.30-1.65	14.11-42.34	0.10-0.16	0.0-2.9	0.0-0.5	.17	.24		
	40-56	20-40- 80	15-31- 53	10-29- 35	1.40-1.50	14.00-42.00	0.05-0.11	1.5-4.0	0.0-0.5	.20	.32		
	56-58	-67-	-15-	15-18- 30	1.30-1.65	14.11-42.34	0.08-0.14	0.0-2.9	0.0-0.5	.17	.24		
JnF:													
Jefferson------------	0-7	-43-	-39-	10-18- 25	1.30-1.50	14.11-42.34	0.10-0.16	0.0-2.9	0.5-5.0	.17	.28	5	8
	7-40	-38-	-36-	18-26- 34	1.30-1.65	14.11-42.34	0.10-0.16	0.0-2.9	0.0-0.5	.17	.24		
	40-56	20-40- 80	15-31- 53	10-29- 35	1.40-1.50	14.00-42.00	0.05-0.11	1.5-4.0	0.0-0.5	.20	.32		
	56-58	-67-	-15-	15-18- 30	1.30-1.65	14.11-42.34	0.08-0.14	0.0-2.9	0.0-0.5	.17	.24		
LbB:													
Lily-----------------	0-3	-42-	-38-	7-20- 27	1.20-1.40	4.23-42.34	0.13-0.18	0.0-2.9	0.5-4.0	.28	.37	2	8
	3-30	-40-	-38-	7-23- 27	1.25-1.35	14.11-42.34	0.12-0.18	0.0-2.9	0.0-0.5	.28	.28		
	30-37	--	--	--	---	---	---	---	---	---	---		
LbC:													
Lily-----------------	0-3	-42-	-38-	7-20- 27	1.20-1.40	4.23-42.34	0.13-0.18	0.0-2.9	0.5-4.0	.28	.37	2	8
	3-30	-40-	-38-	7-23- 27	1.25-1.35	14.11-42.34	0.12-0.18	0.0-2.9	0.0-0.5	.28	.28		
	30-37	--	--	--	---	---	---	---	---	---	---		
LbD:													
Lily-----------------	0-3	-42-	-38-	7-20- 27	1.20-1.40	4.23-42.34	0.13-0.18	0.0-2.9	0.5-4.0	.28	.37	2	8
	3-30	-40-	-38-	7-23- 27	1.25-1.35	14.11-42.34	0.12-0.18	0.0-2.9	0.0-0.5	.28	.28		
	30-37	--	--	--	---	---	---	---	---	---	---		
LgD:													
Lily-----------------	0-3	-42-	-38-	7-20- 27	1.20-1.40	4.23-42.34	0.13-0.18	0.0-2.9	0.5-4.0	.28	.37	2	8
	3-30	-40-	-38-	7-23- 27	1.25-1.35	14.11-42.34	0.12-0.18	0.0-2.9	0.0-0.5	.28	.28		
	30-37	--	--	--	---	---	---	---	---	---	---		
Gilpin---------------	0-6	-26-	-53-	12-21- 27	1.20-1.40	4.23-14.11	0.12-0.18	0.0-2.9	0.5-4.0	.32	.32	3	8
	6-21	-18-	-51-	18-31- 35	1.40-1.60	4.23-14.11	0.12-0.18	0.0-2.9	0.0-1.0	.24	.28		
	21-25	-20-	-52-	18-28- 40	1.20-1.50	4.00-14.00	0.12-0.16	0.0-2.9	0.0-0.5	.24	.32		
	25-35	--	--	--	---	---	---	---	---	---	---		
LgE:													
Lily-----------------	0-3	-42-	-38-	7-20- 27	1.20-1.40	4.23-42.34	0.13-0.18	0.0-2.9	0.5-4.0	.28	.37	2	8
	3-30	-40-	-38-	7-23- 27	1.25-1.35	14.11-42.34	0.12-0.18	0.0-2.9	0.0-0.5	.28	.28		
	30-37	--	--	--	---	---	---	---	---	---	---		
Gilpin---------------	0-6	-26-	-53-	12-21- 27	1.20-1.40	4.23-14.11	0.12-0.18	0.0-2.9	0.5-4.0	.32	.32	3	8
	6-21	-18-	-51-	18-31- 35	1.40-1.60	4.23-14.11	0.12-0.18	0.0-2.9	0.0-1.0	.24	.28		
	21-25	-20-	-52-	18-28- 40	1.20-1.50	4.00-14.00	0.12-0.16	0.0-2.9	0.0-0.5	.24	.32		
	25-35	--	--	--	---	---	---	---	---	---	---		

Table 17.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi- bility group
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct				
LmD:													
Lily-----------------	0-3	-42-	-38-	7-20- 27	1.20-1.40	4.23-42.34	0.13-0.18	0.0-2.9	0.5-4.0	.28	.37	2	8
	3-30	-40-	-38-	7-23- 27	1.25-1.35	14.11-42.34	0.12-0.18	0.0-2.9	0.0-0.5	.28	.28		
	30-37	--	--	--	---	---	---	---	---	---	---		
Ramsey---------------	0-4	-44-	-40-	8-16- 25	1.25-1.50	42.34-141.14	0.09-0.12	0.0-2.9	0.5-2.0	.20	.20	1	8
	4-10	-68-	-16-	8-16- 25	1.20-1.40	42.34-141.14	0.09-0.12	0.0-2.9	0.0-0.5	.17	.20		
	10-16	-68-	-20-	8-12- 25	1.30-1.60	14.11-42.34	0.09-0.15	0.0-2.9	0.0-0.5	.17	.20		
	16-18	--	--	--	---	---	---	---	---	---	---		
LmE:													
Lily-----------------	0-3	-42-	-38-	7-20- 27	1.20-1.40	4.23-42.34	0.13-0.18	0.0-2.9	0.5-4.0	.28	.37	2	8
	3-30	-40-	-38-	7-23- 27	1.25-1.35	14.11-42.34	0.12-0.18	0.0-2.9	0.0-0.5	.28	.28		
	30-37	--	--	--	---	---	---	---	---	---	---		
Ramsey---------------	0-4	-44-	-40-	8-16- 25	1.25-1.50	42.34-141.14	0.09-0.12	0.0-2.9	0.5-2.0	.20	.20	1	8
	4-10	-68-	-16-	8-16- 25	1.20-1.40	42.34-141.14	0.09-0.12	0.0-2.9	0.0-0.5	.17	.20		
	10-16	-68-	-20-	8-12- 25	1.30-1.60	14.11-42.34	0.09-0.15	0.0-2.9	0.0-0.5	.17	.20		
	16-18	--	--	--	---	---	---	---	---	---	---		
LoB:													
Lonewood-------------	0-20	-26-	-56-	12-18- 27	1.30-1.40	4.23-14.11	0.18-0.20	0.0-2.9	1.0-3.0	.37	.37	3	8
	20-28	-17-	-54-	17-29- 36	1.40-1.55	4.23-14.11	0.14-0.17	0.0-2.9	0.0-0.5	.32	.32		
	28-55	-35-	-33-	18-32- 40	1.40-1.55	4.23-14.11	0.14-0.17	0.0-2.9	0.0-0.5	.32	.32		
	55-60	--	--	--	---	---	---	---	---	---	---		
	60-65	--	--	--	---	---	---	---	---	---	---		
LoC:													
Lonewood-------------	0-20	-26-	-56-	12-18- 27	1.30-1.40	4.23-14.11	0.18-0.20	0.0-2.9	1.0-3.0	.37	.37	3	8
	20-28	-17-	-54-	17-29- 36	1.40-1.55	4.23-14.11	0.14-0.17	0.0-2.9	0.0-0.5	.32	.32		
	28-55	-35-	-33-	18-32- 40	1.40-1.55	4.23-14.11	0.14-0.17	0.0-2.9	0.0-0.5	.32	.32		
	55-60	--	--	--	---	---	---	---	---	---	---		
	60-65	--	--	--	---	---	---	---	---	---	---		
LP.													
Limestone quarry													
Me:													
Melvin---------------	0-8	-14-	-71-	12-14- 17	1.20-1.60	4.23-14.11	0.18-0.23	0.0-2.9	0.5-3.0	.43	.43	5	8
	8-52	- 9-	-67-	12-24- 35	1.30-1.60	4.23-14.11	0.18-0.23	0.0-2.9	0.2-0.5	.43	.43		
	52-80	-11-	-68-	7-21- 35	1.40-1.70	4.23-14.11	0.16-0.23	0.0-2.9	0.1-0.5	.43	.43		
MnC:													
Minvale--------------	0-5	-26-	-54-	15-20- 25	1.30-1.45	4.23-14.11	0.16-0.22	0.0-2.9	0.5-2.0	.32	.37	5	8
	5-48	-18-	-50-	25-32- 50	1.40-1.55	4.23-14.11	0.11-0.17	0.0-2.9	0.0-0.5	.28	.32		
	48-62	-28-	-30-	20-42- 50	1.40-1.60	14.11-42.34	0.05-0.10	0.0-2.9	0.0-0.5	.15	.28		

Table 17.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodibility group
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct				
MoC:													
Montevallo-----------	0-2	-29-	-54-	10-17- 25	1.25-1.45	4.00-14.00	0.09-0.18	0.0-2.9	0.5-2.0	.28	.32	2	8
	2-15	-20-	-54-	15-25- 35	1.25-1.50	4.00-14.00	0.02-0.12	0.0-2.9	0.0-0.5	.32	.32		
	15-19	--	--	--	---	---	---	---	---	---	---		
MoD:													
Montevallo-----------	0-2	-29-	-54-	10-17- 25	1.25-1.45	4.00-14.00	0.09-0.18	0.0-2.9	0.5-2.0	.28	.32	2	8
	2-15	-20-	-54-	15-25- 35	1.25-1.50	4.00-14.00	0.02-0.12	0.0-2.9	0.0-0.5	.32	.32		
	15-19	--	--	--	---	---	---	---	---	---	---		
MoE:													
Montevallo-----------	0-2	-29-	-54-	10-17- 25	1.25-1.45	4.00-14.00	0.09-0.18	0.0-2.9	0.5-2.0	.28	.32	2	8
	2-15	-20-	-54-	15-25- 35	1.25-1.50	4.00-14.00	0.02-0.12	0.0-2.9	0.0-0.5	.32	.32		
	15-19	--	--	--	---	---	---	---	---	---	---		
Pp:													
Pope-----------------	0-8	-43-	-40-	7-17- 27	1.20-1.40	4.23-14.11	0.14-0.23	0.0-2.9	1.0-4.0	.37	.37	5	8
	8-43	-44-	-40-	5-16- 27	1.30-1.60	4.23-42.34	0.10-0.18	0.0-2.9	0.0-0.5	.28	.28		
	43-80	-67-	-20-	5-13- 20	1.30-1.60	4.23-42.34	0.10-0.18	0.0-2.9	0.0-0.5	.20	.28		
Philo----------------	0-36	-43-	-40-	7-17- 27	1.20-1.40	4.23-14.11	0.14-0.23	0.0-2.9	1.0-4.0	.37	.37	5	8
	36-48	-45-	-32-	5-23- 27	1.20-1.40	4.23-14.11	0.10-0.20	0.0-2.9	0.0-0.5	.32	.32		
	48-80	-66-	-23-	5-12- 18	1.20-1.40	14.11-42.34	0.06-0.10	0.0-2.9	0.0-0.5	.24	.28		
RaD:													
Ramsey---------------	0-4	-44-	-40-	8-16- 25	1.25-1.50	42.34-141.14	0.09-0.12	0.0-2.9	0.5-2.0	.20	.20	1	8
	4-10	-68-	-16-	8-16- 25	1.20-1.40	42.34-141.14	0.09-0.12	0.0-2.9	0.0-0.5	.17	.20		
	10-16	-68-	-20-	8-12- 25	1.30-1.60	14.11-42.34	0.09-0.15	0.0-2.9	0.0-0.5	.17	.20		
	16-18	--	--	--	---	---	---	---	---	---	---		
Rock outcrop.													
RaF:													
Ramsey---------------	0-4	-44-	-40-	8-16- 25	1.25-1.50	42.34-141.14	0.09-0.12	0.0-2.9	0.5-2.0	.20	.20	1	8
	4-10	-68-	-16-	8-16- 25	1.20-1.40	42.34-141.14	0.09-0.12	0.0-2.9	0.0-0.5	.17	.20		
	10-16	-68-	-20-	8-12- 25	1.30-1.60	14.11-42.34	0.09-0.15	0.0-2.9	0.0-0.5	.17	.20		
	16-18	--	--	--	---	---	---	---	---	---	---		
Rock outcrop.													
Sd:													
Shady----------------	0-6	-43-	-40-	10-18- 25	1.35-1.50	4.23-42.34	0.12-0.18	0.0-2.9	1.0-3.0	.28	.28	5	8
	6-26	-34-	-36-	20-30- 35	1.35-1.55	4.23-14.11	0.14-0.20	0.0-2.9	0.0-0.5	.28	.28		
	26-38	-38-	-36-	20-26- 35	1.35-1.55	4.23-14.11	0.14-0.20	0.0-2.9	0.0-0.5	.28	.28		
	38-48	-67-	-20-	5-12- 20	1.40-1.70	14.11-42.33	0.07-0.20	0.0-2.9	0.0-0.5	.20	.20		

Table 17.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct				
SfB:													
Shady----------------	0-6	-43-	-40-	10-18- 25	1.35-1.50	4.23-42.34	0.12-0.18	0.0-2.9	1.0-3.0	.28	.28	5	8
	6-26	-34-	-36-	20-30- 35	1.35-1.55	4.23-14.11	0.14-0.20	0.0-2.9	0.0-0.5	.28	.28		
	26-38	-38-	-36-	20-26- 35	1.35-1.55	4.23-14.11	0.14-0.20	0.0-2.9	0.0-0.5	.28	.28		
	38-48	-67-	-20-	5-12- 20	1.40-1.70	14.11-42.33	0.07-0.20	0.0-2.9	0.0-0.5	.20	.20		
Swafford-------------	0-12	-42-	-38-	7-20- 27	1.20-1.40	4.23-42.34	0.13-0.18	0.0-2.9	0.5-4.0	.28	.37	5	8
	12-26	-40-	-28-	18-33- 55	1.40-1.50	4.23-14.11	0.14-0.20	0.0-2.9	0.1-0.5	.32	.32		
	26-40	-35-	-33-	18-32- 40	1.40-1.60	4.23-14.11	0.14-0.17	0.0-2.9	0.0-0.5	.32	.32		
	40-80	-35-	-33-	18-32- 40	1.40-1.55	4.23-14.11	0.14-0.17	0.0-2.9	0.0-0.5	.32	.32		
Urban land.													
ShD:													
Shelocta-------------	0-10	-29-	-54-	7-17- 27	1.15-1.30	4.23-14.11	0.16-0.22	0.0-2.9	0.5-5.0	.32	.32	3	8
	10-21	-18-	-51-	18-31- 35	1.40-1.60	4.23-14.11	0.12-0.18	0.0-2.9	0.0-0.5	.28	.28		
	21-65	-17-	-53-	18-30- 40	1.30-1.55	4.23-42.34	0.08-0.16	0.0-2.9	0.0-0.5	.17	.28		
	65-75	--	--	--	---	---	---	---	---	---	---		
SwB:													
Swafford-------------	0-12	-42-	-38-	7-20- 27	1.20-1.40	4.23-42.34	0.13-0.18	0.0-2.9	0.5-4.0	.28	.37	5	8
	12-26	-40-	-28-	18-33- 55	1.40-1.50	4.23-14.11	0.14-0.20	0.0-2.9	0.1-0.5	.32	.32		
	26-40	-35-	-33-	18-32- 40	1.40-1.60	4.23-14.11	0.14-0.17	0.0-2.9	0.0-0.5	.32	.32		
	40-80	-35-	-33-	18-32- 40	1.40-1.55	4.23-14.11	0.14-0.17	0.0-2.9	0.0-0.5	.32	.32		
TaB:													
Tasso----------------	0-9	-43-	-40-	10-18- 25	1.35-1.45	4.23-14.11	0.17-0.20	0.0-2.9	0.5-2.0	.28	.32	5	8
	9-30	-35-	-38-	20-28- 35	1.40-1.55	4.23-14.11	0.17-0.19	0.0-2.9	0.0-0.5	.32	.32		
	30-42	-28-	-30-	20-42- 45	1.50-1.70	1.41-4.23	0.10-0.15	0.0-2.9	0.0-0.5	.32	.32		
	42-62	-28-	-30-	30-42- 45	1.35-1.50	1.41-14.11	0.10-0.15	3.0-5.9	0.0-0.5	.28	.28		
TaC:													
Tasso----------------	0-9	-43-	-40-	10-18- 25	1.35-1.45	4.23-14.11	0.17-0.20	0.0-2.9	0.5-2.0	.28	.32	5	8
	9-30	-35-	-38-	20-28- 35	1.40-1.55	4.23-14.11	0.17-0.19	0.0-2.9	0.0-0.5	.32	.32		
	30-42	-28-	-30-	20-42- 45	1.50-1.70	1.41-4.23	0.10-0.15	0.0-2.9	0.0-0.5	.32	.32		
	42-62	-28-	-30-	30-42- 45	1.35-1.50	1.41-14.11	0.10-0.15	3.0-5.9	0.0-0.5	.28	.28		
TeB2:													
Townley--------------	0-5	-27-	-54-	10-18- 27	1.30-1.60	4.23-14.11	0.12-0.14	0.0-2.9	0.5-2.0	.37	.37	3	8
	5-24	-23-	-29-	30-48- 60	1.30-1.60	0.42-1.41	0.12-0.18	3.0-5.9	0.1-0.9	.28	.32		
	24-28	-18-	-49-	30-33- 60	1.30-1.60	0.42-1.41	0.12-0.18	3.0-5.9	0.0-0.4	.28	.32		
	28-44	--	--	--	---	---	---	---	---	---	---		
Coile----------------	0-3	-27-	-54-	7-19- 30	1.20-1.40	4.23-14.11	0.33-0.46	0.0-2.9	0.5-2.0	.24	.32	2	8
	3-10	-20-	-54-	15-25- 50	1.25-1.45	4.23-14.11	0.20-0.30	0.0-2.9	0.1-0.5	.20	.28		
	10-18	-28-	-29-	15-43- 50	1.20-1.50	1.41-14.11	0.15-0.30	0.0-2.9	0.1-0.5	.20	.28		
	18-24	--	--	--	---	---	---	---	---	---	---		

Table 17.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group
										Kw	Kf	T	
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct				
TeC:													
Townley--------------	0-8	-27-	-54-	10-18- 27	1.30-1.60	4.00-14.00	0.12-0.14	0.0-2.9	0.5-2.0	.37	.37	3	8
	8-20	- 6-	-61-	29-33- 39	1.30-1.60	0.42-1.40	0.12-0.18	3.0-5.9	0.0-0.5	.28	.32		
	20-30	- 6-	-46-	35-48- 60	1.30-1.60	0.42-1.40	0.12-0.18	3.0-5.9	0.0-0.5	.28	.32		
	30-36	- 8-	-54-	37-38- 47	1.40-1.50	1.41-4.23	0.10-0.14	3.0-5.9	0.0-0.5	.28	.28		
	36-46	--	--	--	---	---	---	---	---	---	---		
TeD:													
Townley--------------	0-8	-27-	-54-	10-18- 27	1.30-1.60	4.00-14.00	0.12-0.14	0.0-2.9	0.5-2.0	.37	.37	3	8
	8-20	- 6-	-61-	29-33- 39	1.30-1.60	0.42-1.40	0.12-0.18	3.0-5.9	0.0-0.5	.28	.32		
	20-30	- 6-	-46-	35-48- 60	1.30-1.60	0.42-1.40	0.12-0.18	3.0-5.9	0.0-0.5	.28	.32		
	30-36	- 8-	-54-	37-38- 47	1.40-1.50	1.41-4.23	0.10-0.14	3.0-5.9	0.0-0.5	.28	.28		
	36-46	--	--	--	---	---	---	---	---	---	---		
TeE:													
Townley--------------	0-8	-27-	-54-	10-18- 27	1.30-1.60	4.00-14.00	0.12-0.14	0.0-2.9	0.5-2.0	.37	.37	3	8
	8-20	- 6-	-61-	29-33- 39	1.30-1.60	0.42-1.40	0.12-0.18	3.0-5.9	0.0-0.5	.28	.32		
	20-30	- 6-	-46-	35-48- 60	1.30-1.60	0.42-1.40	0.12-0.18	3.0-5.9	0.0-0.5	.28	.32		
	30-36	- 8-	-54-	37-38- 47	1.40-1.50	1.41-4.23	0.10-0.14	3.0-5.9	0.0-0.5	.28	.28		
	36-46	--	--	--	---	---	---	---	---	---	---		
TuD:													
Townley--------------	0-8	-27-	-54-	10-18- 27	1.30-1.60	4.00-14.00	0.12-0.14	0.0-2.9	0.5-2.0	.37	.37	3	8
	8-20	- 6-	-61-	29-33- 39	1.30-1.60	0.42-1.40	0.12-0.18	3.0-5.9	0.0-0.5	.28	.32		
	20-30	- 6-	-46-	35-48- 60	1.30-1.60	0.42-1.40	0.12-0.18	3.0-5.9	0.0-0.5	.28	.32		
	30-36	- 8-	-54-	37-38- 47	1.40-1.50	1.41-4.23	0.10-0.14	3.0-5.9	0.0-0.5	.28	.28		
	36-46	--	--	--	---	---	---	---	---	---	---		
Armuchee-------------	0-6	-19-	-55-	22-26- 32	1.35-1.45	4.23-14.11	0.15-0.20	0.0-2.9	0.5-2.0	.37	.32	3	8
	6-11	- 8-	-54-	37-38- 47	1.40-1.50	1.41-4.23	0.10-0.14	3.0-5.9	0.0-0.5	.28	.37		
	11-21	- 8-	-52-	35-40- 45	1.40-1.50	1.41-4.23	0.05-0.10	3.0-5.9	0.0-0.5	.28	.32		
	21-40	--	--	--	---	---	---	---	---	---	---		
Urban land.													
TuE:													
Townley--------------	0-8	-27-	-54-	10-18- 27	1.30-1.60	4.00-14.00	0.12-0.14	0.0-2.9	0.5-2.0	.37	.37	3	8
	8-20	- 6-	-61-	29-33- 39	1.30-1.60	0.42-1.40	0.12-0.18	3.0-5.9	0.0-0.5	.28	.32		
	20-30	- 6-	-46-	35-48- 60	1.30-1.60	0.42-1.40	0.12-0.18	3.0-5.9	0.0-0.5	.28	.32		
	30-36	- 8-	-54-	37-38- 47	1.40-1.50	1.41-4.23	0.10-0.14	3.0-5.9	0.0-0.5	.28	.28		
	36-46	--	--	--	---	---	---	---	---	---	---		
Armuchee-------------	0-6	-19-	-55-	22-26- 32	1.35-1.45	4.23-14.11	0.15-0.20	0.0-2.9	0.5-2.0	.37	.32	3	8
	6-11	- 8-	-54-	37-38- 47	1.40-1.50	1.41-4.23	0.10-0.14	3.0-5.9	0.0-0.5	.28	.37		
	11-21	- 8-	-52-	35-40- 45	1.40-1.50	1.41-4.23	0.05-0.10	3.0-5.9	0.0-0.5	.28	.32		
	21-40	--	--	--	---	---	---	---	---	---	---		
Urban land.													

Table 17.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct				
UrD.													
Urban land													
W.													
Water													
WaB:													
Waynesboro-----------	0-6	-42-	-38-	10-20- 25	1.40-1.55	4.23-14.11	0.15-0.21	0.0-2.9	0.5-2.0	.28	.28	5	8
	6-11	-36-	-39-	10-25- 35	1.40-1.55	4.23-14.11	0.14-0.20	0.0-2.9	0.2-1.0	.28	.28		
	11-35	-33-	-32-	18-35- 42	1.40-1.55	4.23-14.11	0.16-0.20	0.0-2.9	0.0-0.5	.28	.28		
	35-80	-28-	-29-	35-43- 50	1.40-1.55	4.23-14.11	0.13-0.18	0.0-2.9	0.0-0.5	.28	.28		
WaC:													
Waynesboro-----------	0-6	-42-	-38-	10-20- 25	1.40-1.55	4.23-14.11	0.15-0.21	0.0-2.9	0.5-2.0	.28	.28	5	8
	6-11	-36-	-39-	10-25- 35	1.40-1.55	4.23-14.11	0.14-0.20	0.0-2.9	0.2-1.0	.28	.28		
	11-35	-33-	-32-	18-35- 42	1.40-1.55	4.23-14.11	0.16-0.20	0.0-2.9	0.0-0.5	.28	.28		
	35-80	-28-	-29-	35-43- 50	1.40-1.55	4.23-14.11	0.13-0.18	0.0-2.9	0.0-0.5	.28	.28		
WaD:													
Waynesboro-----------	0-6	-42-	-38-	10-20- 25	1.40-1.55	4.23-14.11	0.15-0.21	0.0-2.9	0.5-2.0	.28	.28	5	8
	6-11	-36-	-39-	10-25- 35	1.40-1.55	4.23-14.11	0.14-0.20	0.0-2.9	0.2-1.0	.28	.28		
	11-35	-33-	-32-	18-35- 42	1.40-1.55	4.23-14.11	0.16-0.20	0.0-2.9	0.0-0.5	.28	.28		
	35-80	-28-	-29-	35-43- 50	1.40-1.55	4.23-14.11	0.13-0.18	0.0-2.9	0.0-0.5	.28	.28		
WeD:													
Waynesboro-----------	0-6	-42-	-38-	10-20- 25	1.40-1.55	4.23-14.11	0.15-0.21	0.0-2.9	0.5-2.0	.28	.28	5	8
	6-11	-36-	-39-	10-25- 35	1.40-1.55	4.23-14.11	0.14-0.20	0.0-2.9	0.2-1.0	.28	.28		
	11-35	-33-	-32-	18-35- 42	1.40-1.55	4.23-14.11	0.16-0.20	0.0-2.9	0.0-0.5	.28	.28		
	35-80	-28-	-29-	35-43- 50	1.40-1.55	4.23-14.11	0.13-0.18	0.0-2.9	0.0-0.5	.28	.28		
Etowah---------------	0-12	-35-	-51-	8-14- 25	1.30-1.45	4.23-14.11	0.15-0.20	0.0-2.9	1.0-3.0	.37	.37	5	8
	12-27	-38-	-36-	18-25- 35	1.35-1.50	4.23-14.11	0.16-0.20	0.0-2.9	0.0-0.5	.32	.32		
	27-80	-33-	-32-	18-35- 42	1.40-1.55	4.23-14.11	0.16-0.20	0.0-2.9	0.0-0.5	.32	.32		
Urban land.													
WhB:													
Whitwell-------------	0-10	-43-	-40-	10-18- 25	1.35-1.55	4.23-14.11	0.15-0.20	0.0-2.9	1.0-3.0	.24	.32	5	8
	10-38	-34-	-37-	18-29- 40	1.40-1.70	4.23-14.11	0.14-0.20	0.0-2.9	0.0-1.0	.32	.32		
	38-80	-39-	-36-	18-25- 32	1.40-1.70	4.23-14.11	0.14-0.20	0.0-2.9	0.0-1.0	.32	.32		

Table 18.—Chemical Soil Properties

(Absence of an entry indicates that data were not estimated)

Map symbol and soil name	Depth	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	pH
AeC:			
Allen----------------	0-3	1.7-4.9	4.5-5.5
	3-28	3.5-8.4	4.5-5.5
	28-60	5.3-11	4.5-5.5
AeD:			
Allen----------------	0-3	1.7-4.9	4.5-5.5
	3-28	3.5-8.4	4.5-5.5
	28-60	5.3-11	4.5-5.5
AfD:			
Allen----------------	0-3	1.7-4.9	4.5-5.5
	3-28	3.5-8.4	4.5-5.5
	28-60	5.3-11	4.5-5.5
Jefferson------------	0-11	1.1-4.9	3.6-5.5
	11-35	3.5-7.4	4.5-5.5
	35-48	3.5-8.2	4.5-5.5
	48-60	0.9-4.7	4.0-6.5
Urban land.			
AmC:			
Armuchee-------------	0-6	3.9-6.3	4.5-5.5
	6-11	7.4-12	4.5-5.5
	11-21	6.9-11	4.5-5.5
	21-40	---	---
AmD:			
Armuchee-------------	0-6	3.9-6.3	4.5-5.5
	6-11	7.4-12	4.5-5.5
	11-21	6.9-11	4.5-5.5
	21-40	---	---
AmE:			
Armuchee-------------	0-6	3.9-6.3	4.5-5.5
	6-11	7.4-12	4.5-5.5
	11-21	6.9-11	4.5-5.5
	21-40	---	---
ANS. Area not surveyed			
ApC:			
Apison---------------	0-3	2.0-5.1	4.5-5.5
	3-22	3.9-8.4	4.5-5.5
	22-60	---	---
Sunlight-------------	0-3	1.7-5.1	4.5-5.5
	3-13	3.5-8.4	4.5-5.5
	13-20	---	---

Table 18.—Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	pH
ApF:			
Apison---------------	0-3	2.0-5.1	4.5-5.5
	3-22	3.9-8.4	4.5-5.5
	22-60	---	---
Sunlight-------------	0-3	1.7-5.1	4.5-5.5
	3-13	3.5-8.4	4.5-5.5
	13-20	---	---
ASD.			
Ash disposal area			
BeF:			
Bethesda-------------	0-23	5.7-13	3.6-5.5
	23-46	5.7-18	3.6-5.5
	46-60	1.9-21	3.6-5.5
Mines pit.			
Bg:			
Bloomingdale---------	0-9	---	5.6-8.4
	9-80	---	5.6-8.4
BrE:			
Bradyville-----------	0-6	1.4-3.9	5.1-5.5
	6-44	---	5.1-7.3
	44-48	---	---
Rock outcrop.			
CaB:			
Capshaw--------------	0-4	---	5.1-8.0
	4-24	---	5.1-7.0
	24-36	---	5.1-7.0
	36-72	---	5.6-7.0
	72-76	---	---
CbD:			
Colbert--------------	0-9	---	4.5-6.5
	9-58	---	4.5-6.5
	58-60	---	---
Lyerly---------------	0-5	---	4.5-6.5
	5-10	---	4.5-6.5
	10-38	---	4.5-6.5
	38-40	---	---
Rock outcrop.			
CoC:			
Collegedale----------	0-5	2.4-4.9	4.0-5.5
	5-80	6.9-15	4.0-5.5
CoD:			
Collegedale----------	0-5	2.4-4.9	4.0-5.5
	5-80	6.9-15	4.0-5.5

Table 18.—Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	pH
DeB:			
Dewey----------------	0-7	---	4.5-6.0
	7-27	---	4.5-6.0
	27-60	---	4.5-5.5
DeC:			
Dewey----------------	0-7	---	4.5-6.0
	7-27	---	4.5-6.0
	27-60	---	4.5-5.5
DeD:			
Dewey----------------	0-7	---	4.5-6.0
	7-27	---	4.5-6.0
	27-60	---	4.5-5.5
DeE:			
Dewey----------------	0-7	---	4.5-6.0
	7-27	---	4.5-6.0
	27-60	---	4.5-5.5
EcB:			
Ealy-----------------	0-10	0.8-3.3	4.5-5.5
	10-60	0.9-3.5	4.5-5.5
Craigsville----------	0-3	3.0-8.6	4.5-5.5
	3-21	2.6-8.1	4.5-5.5
	21-60	2.6-5.6	4.5-5.5
EtB:			
Etowah---------------	0-12	1.3-4.7	4.5-5.5
	12-27	3.5-8.4	4.5-5.5
	27-60	3.5-10	4.5-5.5
EtC:			
Etowah---------------	0-12	1.3-4.7	4.5-5.5
	12-27	3.5-8.4	4.5-5.5
	27-60	3.5-10	4.5-5.5
FuB:			
Fullerton------------	0-7	---	4.5-5.5
	7-60	---	4.5-5.5
Pailo----------------	0-15	1.4-3.7	3.6-6.0
	15-40	3.9-8.4	3.6-5.5
	40-80	3.9-12	3.6-5.5
FuC:			
Fullerton------------	0-7	---	4.5-5.5
	7-60	---	4.5-5.5
Pailo----------------	0-15	1.4-3.7	3.6-6.0
	15-40	3.9-8.4	3.6-5.5
	40-80	3.9-12	3.6-5.5

Table 18.—Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	pH
FuD:			
Fullerton	0-7	---	4.5-5.5
	7-60	---	4.5-5.5
Pailo	0-15	1.4-3.7	3.6-6.0
	15-40	3.9-8.4	3.6-5.5
	40-80	3.9-12	3.6-5.5
FuE:			
Fullerton	0-7	---	4.5-5.5
	7-60	---	4.5-5.5
Pailo	0-15	1.4-3.7	3.6-6.0
	15-40	3.9-8.4	3.6-5.5
	40-80	3.9-12	3.6-5.5
FwD:			
Fullerton	0-7	---	4.5-5.5
	7-60	---	4.5-5.5
Dewey	0-7	---	4.5-6.0
	7-27	---	4.5-6.0
	27-60	---	4.5-5.5
Urban land.			
FwE:			
Fullerton	0-7	---	4.5-5.5
	7-60	---	4.5-5.5
Dewey	0-7	---	4.5-6.0
	7-27	---	4.5-6.0
	27-60	---	4.5-5.5
Urban land.			
GnD:			
Gilpin	0-6	2.8-9.1	3.6-5.5
	6-21	5.3-18	3.6-5.5
	21-25	5.7-21	3.6-5.5
	25-35	---	---
GpE:			
Gilpin	0-6	2.8-9.1	3.6-5.5
	6-21	5.3-18	3.6-5.5
	21-25	5.7-21	3.6-5.5
	25-35	---	---
Petros	0-2	2.1-5.3	4.5-5.5
	2-8	2.2-6.4	4.5-5.5
	8-16	2.3-6.4	4.5-5.5
	16-18	---	---
GpF:			
Gilpin	0-6	2.8-9.1	3.6-5.5
	6-21	5.3-18	3.6-5.5
	21-25	5.7-21	3.6-5.5
	25-35	---	---

Table 18.—Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	pH
GpF:			
Petros	0-2	2.1-5.3	4.5-5.5
	2-8	2.2-6.4	4.5-5.5
	8-16	2.3-6.4	4.5-5.5
	16-18	---	---
GsF:			
Gilpin	0-6	2.8-9.1	3.6-5.5
	6-21	5.3-18	3.6-5.5
	21-25	5.7-21	3.6-5.5
	25-35	---	---
Bouldin	0-2	---	4.5-5.5
	2-17	1.0-3.8	4.5-5.5
	17-30	1.0-3.8	4.5-5.5
	30-80	1.0-4.7	4.5-5.5
Petros	0-2	2.1-5.3	4.5-5.5
	2-8	2.2-6.4	4.5-5.5
	8-16	2.3-6.4	4.5-5.5
	16-18	---	---
Ha:			
Hamblen	0-5	---	5.1-7.3
	5-43	---	5.1-7.3
	43-62	3.7-7.6	4.5-6.0
HeB:			
Hendon	0-2	2.0-4.7	4.0-5.5
	2-9	2.3-5.4	4.0-5.5
	9-22	1.3-9.7	4.0-5.5
	22-30	3.5-9.7	4.0-5.5
	30-60	3.5-9.7	4.0-5.5
HeC:			
Hendon	0-2	2.0-4.7	4.0-5.5
	2-9	2.3-5.4	4.0-5.5
	9-22	1.3-9.7	4.0-5.5
	22-30	3.5-9.7	4.0-5.5
	30-60	3.5-9.7	4.0-5.5
JeC:			
Jefferson	0-11	1.1-4.9	3.6-5.5
	11-35	3.5-7.4	4.5-5.5
	35-48	3.5-8.2	4.5-5.5
	48-60	0.9-4.7	4.0-6.5
JeE:			
Jefferson	0-11	1.1-4.9	3.6-5.5
	11-35	3.5-7.4	4.5-5.5
	35-48	3.5-8.2	4.5-5.5
	48-60	0.9-4.7	4.0-6.5
JnD:			
Jefferson	0-7	1.6-4.9	4.5-5.5
	7-40	3.5-8.2	4.5-5.5
	40-56	1.9-8.4	4.5-5.5
	56-60	2.9-7.2	4.5-5.5

Table 18.—Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	pH
JnF:			
Jefferson------------	0-7	1.6-4.9	4.5-5.5
	7-40	3.5-8.2	4.5-5.5
	40-56	1.9-8.4	4.5-5.5
	56-60	2.9-7.2	4.5-5.5
LbB:			
Lily-----------------	0-3	1.1-5.3	3.6-5.5
	3-30	1.3-6.4	3.6-5.5
	30-37	---	---
LbC:			
Lily-----------------	0-3	1.1-5.3	3.6-5.5
	3-30	1.3-6.4	3.6-5.5
	30-37	---	---
LbD:			
Lily-----------------	0-3	1.1-5.3	3.6-5.5
	3-30	1.3-6.4	3.6-5.5
	30-37	---	---
LgD:			
Lily-----------------	0-3	1.1-5.3	3.6-5.5
	3-30	1.3-6.4	3.6-5.5
	30-37	---	---
Gilpin---------------	0-6	2.8-9.1	3.6-5.5
	6-21	5.3-18	3.6-5.5
	21-25	5.7-21	3.6-5.5
	25-35	---	---
LgE:			
Lily-----------------	0-3	1.1-5.3	3.6-5.5
	3-30	1.3-6.4	3.6-5.5
	30-37	---	---
Gilpin---------------	0-6	2.8-9.1	3.6-5.5
	6-21	5.3-18	3.6-5.5
	21-25	5.7-21	3.6-5.5
	25-35	---	---
LmD:			
Lily-----------------	0-3	1.1-5.3	3.6-5.5
	3-30	1.3-6.4	3.6-5.5
	30-37	---	---
Ramsey---------------	0-4	---	4.5-5.5
	4-10	---	4.5-5.5
	10-16	---	3.6-5.5
	16-18	---	---
LmE:			
Lily-----------------	0-3	1.1-5.3	3.6-5.5
	3-30	1.3-6.4	3.6-5.5
	30-37	---	---
Ramsey---------------	0-4	---	4.5-5.5
	4-10	---	4.5-5.5
	10-16	---	3.6-5.5
	16-18	---	---

Table 18.—Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	pH
LoB:			
Lonewood-------------	0-20	2.0-5.1	4.5-5.5
	20-28	3.3-8.7	4.5-5.5
	28-55	3.5-9.7	4.0-5.5
	55-60	---	---
	60-65	---	---
LoC:			
Lonewood-------------	0-20	2.0-5.1	4.5-5.5
	20-28	3.3-8.7	4.5-5.5
	28-55	3.5-9.7	4.0-5.5
	55-60	---	---
	60-65	---	---
LP.			
Limestone quarry			
Me:			
Melvin---------------	0-8	---	4.0-7.0
	8-52	---	4.0-7.0
	52-80	---	4.0-7.0
MnC:			
Minvale--------------	0-5	---	4.5-5.5
	5-48	---	4.5-5.5
	48-62	---	3.6-5.5
MoC:			
Montevallo-----------	0-2	---	4.5-6.0
	2-15	---	4.0-6.0
	15-19	---	---
MoD:			
Montevallo-----------	0-2	---	4.5-6.0
	2-15	---	4.0-6.0
	15-19	---	---
MoE:			
Montevallo-----------	0-2	---	4.5-6.0
	2-15	---	4.0-6.0
	15-19	---	---
Pp:			
Pope-----------------	0-8	1.5-8.4	3.6-5.5
	8-43	1.3-13	3.6-5.5
	43-80	1.3-9.5	3.6-5.5
Philo----------------	0-36	1.5-8.4	3.6-5.5
	36-48	1.3-13	3.6-6.0
	48-80	1.3-8.4	3.6-6.0
RaD:			
Ramsey---------------	0-4	---	4.5-5.5
	4-10	---	4.5-5.5
	10-16	---	3.6-5.5
	16-18	---	---
Rock outcrop.			

Table 18.—Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	pH
RaF:			
Ramsey----------------	0-4	---	4.5-5.5
	4-10	---	4.5-5.5
	10-16	---	3.6-5.5
	16-18	---	---
Rock outcrop.			
Sd:			
Shady-----------------	0-6	---	4.5-6.5
	6-26	---	4.5-6.0
	26-38	---	4.5-6.0
	38-48	---	4.5-6.5
SfB:			
Shady-----------------	0-6	---	4.5-6.5
	6-26	---	4.5-6.0
	26-38	---	4.5-6.0
	38-48	---	4.5-6.5
Swafford--------------	0-12	1.1-5.3	3.6-5.5
	12-26	3.5-6.9	4.5-6.0
	26-40	3.5-9.7	4.5-5.5
	40-80	3.5-9.7	4.5-5.5
Urban land.			
ShD:			
Shelocta--------------	0-10	1.5-9.1	4.5-5.5
	10-21	5.7-18	4.5-5.5
	21-65	5.7-21	4.5-5.5
	65-75	---	---
SwB:			
Swafford--------------	0-12	1.1-5.3	3.6-5.5
	12-26	3.5-6.9	4.5-6.0
	26-40	3.5-9.7	4.5-5.5
	40-80	3.5-9.7	4.5-5.5
TaB:			
Tasso-----------------	0-9	---	4.5-8.0
	9-30	---	4.5-6.0
	30-42	3.9-11	4.5-5.5
	42-62	5.9-11	4.5-5.5
TaC:			
Tasso-----------------	0-9	---	4.5-8.0
	9-30	---	4.5-6.0
	30-42	3.9-11	4.5-5.5
	42-62	5.9-11	4.5-5.5
TeB2:			
Townley---------------	0-5	1.7-5.3	4.5-5.5
	5-24	5.7-13	4.5-5.5
	24-28	6.0-15	3.6-5.5
	28-44	---	---

Table 18.—Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	pH
TeB2:			
Coile----------------	0-3	1.2-5.9	4.5-6.0
	3-10	2.9-11	4.5-6.0
	10-18	2.9-11	4.5-6.0
	18-24	---	---
TeC:			
Townley--------------	0-8	1.7-5.3	3.6-5.5
	8-20	5.7-9.5	3.6-5.5
	20-30	6.9-15	3.6-5.5
	30-36	7.4-11	3.6-5.5
	36-46	---	---
TeD:			
Townley--------------	0-8	1.7-5.3	3.6-5.5
	8-20	5.7-9.5	3.6-5.5
	20-30	6.9-15	3.6-5.5
	30-36	7.4-12	3.6-5.5
	36-46	---	---
TeE:			
Townley--------------	0-8	1.7-5.3	3.6-5.5
	8-20	5.7-9.5	3.6-5.5
	20-30	6.9-15	3.6-5.5
	30-36	7.4-12	3.6-5.5
	36-46	---	---
TuD:			
Townley--------------	0-8	1.7-5.3	3.6-5.5
	8-20	5.7-9.5	3.6-5.5
	20-30	6.9-15	3.6-5.5
	30-36	7.4-12	3.6-5.5
	36-46	---	---
Armuchee-------------	0-6	3.9-6.3	4.5-5.5
	6-11	7.4-12	4.5-5.5
	11-21	6.9-11	4.5-5.5
	21-40	---	---
Urban land.			
TuE:			
Townley--------------	0-8	1.7-5.3	3.6-5.5
	8-20	5.7-9.5	3.6-5.5
	20-30	6.9-15	3.6-5.5
	30-36	7.4-12	3.6-5.5
	36-46	---	---
Armuchee-------------	0-6	3.9-6.3	4.5-5.5
	6-11	7.4-12	4.5-5.5
	11-21	6.9-11	4.5-5.5
	21-40	---	---
Urban land.			
UrD.			
Urban land			
W.			
Water			

Table 18.—Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	pH
WaB:			
Waynesboro-----------	0-6	---	4.5-7.0
	6-11	---	4.5-6.5
	11-35	---	4.5-5.5
	35-60	---	4.5-5.5
WaC:			
Waynesboro-----------	0-6	---	4.5-7.0
	6-11	---	4.5-6.5
	11-35	---	4.5-5.5
	35-60	---	4.5-5.5
WaD:			
Waynesboro-----------	0-6	---	4.5-7.0
	6-11	---	4.5-6.5
	11-35	---	4.5-5.5
	35-60	---	4.5-5.5
WeD:			
Waynesboro-----------	0-6	---	4.5-7.0
	6-11	---	4.5-6.5
	11-35	---	4.5-5.5
	35-60	---	4.5-5.5
Etowah---------------	0-12	1.3-4.7	4.5-5.5
	12-27	3.5-8.4	4.5-5.5
	27-60	3.5-10	4.5-5.5
Urban land.			
WhB:			
Whitwell-------------	0-10	1.7-4.7	4.5-6.0
	10-38	3.3-9.7	4.5-5.5
	38-80	3.3-7.7	4.5-5.5

Table 19.—Water Features

(Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated)

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
AeC:										
Allen---------------------	B	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
AeD:										
Allen---------------------	B	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 19.—Water Features—Continued

Map symbol and soil name	Hydrologic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				Ft	Ft	Ft				
AfD:										
Allen	B	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Jefferson	B	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Urban land.										
AmC:										
Armuchee	C	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 19.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
AmD:										
Armuchee------------------	C	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
AmE:										
Armuchee------------------	C	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
ANS.										
Area not surveyed										
ApC:										
Apison--------------------	B	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 19.—Water Features—Continued

Map symbol and soil name	Hydrologic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
ApC:										
Sunlight	C	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
ApF:										
Apison	B	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Sunlight	C	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
ASD.										
Ash disposal area										

Table 19.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
BeF:										
Bethesda	C	Very high								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Mines pit.										
Bg:										
Bloomingdale	D	Negligible								
			January	0.0-1.0	>6.0	---	---	None	Brief	Occasional
			February	0.0-1.0	>6.0	---	---	None	Brief	Occasional
			March	0.0-1.0	>6.0	---	---	None	Brief	Occasional
			April	0.0-1.0	>6.0	---	---	None	Brief	Occasional
			May	0.0-1.0	>6.0	---	---	None	Brief	Occasional
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	0.0-1.0	>6.0	---	---	None	Brief	Occasional
			December	0.0-1.0	>6.0	---	---	None	Brief	Occasional
BrE:										
Bradyville	C	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Rock outcrop.										

Table 19.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
CaB:										
Capshaw	C	Low								
			January	2.0-3.5	>6.0	---	---	None	---	None
			February	2.0-3.5	>6.0	---	---	None	---	None
			March	2.0-3.5	>6.0	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	2.0-3.5	>6.0	---	---	None	---	None
CbD:										
Colbert	D	Very high								
			January	3.5-5.0	>6.0	---	---	None	---	None
			February	3.5-5.0	>6.0	---	---	None	---	None
			March	3.5-5.0	>6.0	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	3.5-5.0	>6.0	---	---	None	---	None
Lyerly	D	Very high								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Rock outcrop.										

Table 19.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
CoC:										
Collegedale	C	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
CoD:										
Collegedale	C	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
DeB:										
Dewey	B	Low								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 19.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
DeC:										
Dewey---------------------	B	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
DeD:										
Dewey---------------------	B	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
DeE:										
Dewey---------------------	B	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 19.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				Ft	Ft	Ft				
EcB:										
Ealy	B	Very low								
			January	5.0-6.0	>6.0	---	---	None	Very brief	Rare
			February	5.0-6.0	>6.0	---	---	None	Very brief	Rare
			March	5.0-6.0	>6.0	---	---	None	Very brief	Rare
			April	---	---	---	---	None	Very brief	Rare
			May	---	---	---	---	None	Very brief	Rare
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	Very brief	Rare
			December	5.0-6.0	>6.0	---	---	None	Very brief	Rare
Craigsville	B	Very low								
			January	5.0-6.0	>6.0	---	---	None	Very brief	Rare
			February	5.0-6.0	>6.0	---	---	None	Very brief	Rare
			March	5.0-6.0	>6.0	---	---	None	Very brief	Rare
			April	---	---	---	---	None	Very brief	Rare
			May	---	---	---	---	None	Very brief	Rare
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	Very brief	Rare
			December	5.0-6.0	>6.0	---	---	None	Very brief	Rare
EtB:										
Etowah	B	Low								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 19.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
EtC:										
Etowah	B	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
FuB:										
Fullerton	B	Low								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Pailo	B	Low								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 19.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
FuC:										
Fullerton-----------------	B	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Pailo---------------------	B	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
FuD:										
Fullerton-----------------	B	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 19.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
FuD:										
Pailo	B	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
FuE:										
Fullerton	B	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Pailo	B	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 19.—Water Features—Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
FwD:										
Fullerton	B	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Dewey	B	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Urban land.										
FwE:										
Fullerton	B	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 19.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
FwE:										
Dewey	B	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Urban land.										
GnD:										
Gilpin	C	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
GpE:										
Gilpin	C	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 19.—Water Features—Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table Upper limit	Water table Lower limit	Ponding Surface water depth	Ponding Duration	Ponding Frequency	Flooding Duration	Flooding Frequency
				Ft	Ft	Ft				
GpE:										
Petros	D	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
GpF:										
Gilpin	C	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Petros	D	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 19.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				Ft	Ft	Ft				
GsF:										
Gilpin	C	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Bouldin	B	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Petros	D	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 19.—Water Features—Continued

Map symbol and soil name	Hydrologic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				Ft	Ft	Ft				
Ha:										
Hamblen	C	Negligible								
			January	2.0-3.0	>6.0	---	---	None	Very brief	Occasional
			February	2.0-3.0	>6.0	---	---	None	Very brief	Occasional
			March	2.0-3.0	>6.0	---	---	None	Very brief	Occasional
			December	2.0-3.0	>6.0	---	---	None	Very brief	Occasional
HeB:										
Hendon	C	Low								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
HeC:										
Hendon	C	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 19.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
JeC:										
Jefferson	B	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
JeE:										
Jefferson	B	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
JnD:										
Jefferson	B	---								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 19.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
JnF:										
Jefferson	B	---								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
LbB:										
Lily	B	Low								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
LbC:										
Lily	B	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 19.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
LbD:										
Lily	B	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
LgD:										
Lily	B	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Gilpin	C	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 19.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
LgE:										
Lily	B	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Gilpin	C	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
LmD:										
Lily	B	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 19.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
LmD:										
Ramsey	D	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
LmE:										
Lily	B	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Ramsey	D	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 19.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
LoB:										
Lonewood------------------	B	Low								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
LoC:										
Lonewood------------------	B	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
LP.										
Limestone quarry										
Me:										
Melvin--------------------	D	Negligible								
			January	0.0-1.0	3.3-6.7	---	---	None	Brief	Frequent
			February	0.0-1.0	3.3-6.7	---	---	None	Brief	Frequent
			March	0.0-1.0	3.3-6.7	---	---	None	Brief	Frequent
			April	0.0-1.0	3.3-6.7	---	---	None	Brief	Frequent
			May	0.0-1.0	3.3-6.7	---	---	None	Brief	Frequent
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	0.0-1.0	3.3-6.7	---	---	None	Brief	Frequent

Table 19.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
MnC:										
Minvale-------------------	B	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
MoC:										
Montevallo----------------	D	Low								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
MoD:										
Montevallo----------------	D	Low								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 19.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
MoE:										
Montevallo----------------	D	Low								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Pp:										
Pope----------------------	B	Negligible								
			January	---	---	---	---	None	Brief	Frequent
			February	---	---	---	---	None	Brief	Frequent
			March	---	---	---	---	None	Brief	Frequent
			April	---	---	---	---	None	Brief	Frequent
			May	---	---	---	---	None	Brief	Frequent
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	Brief	Frequent
			November	---	---	---	---	None	Brief	Frequent
			December	---	---	---	---	None	Brief	Frequent
Philo---------------------	B	Negligible								
			January	1.5-3.0	>6.0	---	---	None	Brief	Frequent
			February	1.5-3.0	>6.0	---	---	None	Brief	Frequent
			March	1.5-3.0	>6.0	---	---	None	Brief	Frequent
			April	1.5-3.0	>6.0	---	---	None	Brief	Frequent
			May	---	---	---	---	None	Brief	Frequent
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	Brief	Frequent
			November	---	---	---	---	None	Brief	Frequent
			December	1.5-3.0	>6.0	---	---	None	Brief	Frequent

Table 19.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
RaD:										
Ramsey--------------------	D	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Rock outcrop.										
RaF:										
Ramsey--------------------	D	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Rock outcrop.										

Table 19.—Water Features—Continued

Map symbol and soil name	Hydrologic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
Sd:										
Shady	B	Very low								
			January	5.0-6.0	>6.0	---	---	None	Very brief	Occasional
			February	5.0-6.0	>6.0	---	---	None	Very brief	Occasional
			March	5.0-6.0	>6.0	---	---	None	Very brief	Occasional
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	5.0-6.0	>6.0	---	---	None	---	None
SfB:										
Shady	B	Very low								
			January	5.0-6.0	>6.0	---	---	None	---	None
			February	5.0-6.0	>6.0	---	---	None	---	None
			March	5.0-6.0	>6.0	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	5.0-6.0	>6.0	---	---	None	---	None
Swafford	C	Medium								
			January	2.0-3.0	---	---	---	None	---	None
			February	2.0-3.0	---	---	---	None	---	None
			March	2.0-3.0	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Urban land.										

Table 19.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
ShD:										
Shelocta------------------	B	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
SwB:										
Swafford------------------	C	Medium								
			January	2.0-3.0	---	---	---	None	---	None
			February	2.0-3.0	---	---	---	None	---	None
			March	2.0-3.0	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
TaB:										
Tasso---------------------	B	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 19.—Water Features—Continued

Map symbol and soil name	Hydrologic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
TaC:										
Tasso	B	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
TeB2:										
Townley	C	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Coile	D	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 19.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
TeC:										
Townley-------------------	C	Very high								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
TeD:										
Townley-------------------	C	Very high								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
TeE:										
Townley-------------------	C	Very high								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 19.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				Ft	Ft	Ft				
TuD:										
Townley------------------	C	Very high								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Armuchee-----------------	C	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Urban land.										
TuE:										
Townley------------------	C	Very high								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 19.—Water Features—Continued

Map symbol and soil name	Hydrologic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
TuE:										
Armuchee	C	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Urban land.										
UrD.										
Urban land										
W.										
Water										
WaB:										
Waynesboro	B	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 19.—Water Features—Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
WaC:										
Waynesboro----------------	B	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
WaD:										
Waynesboro----------------	B	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
WeD:										
Waynesboro----------------	B	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 19.—Water Features—Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
WeD:										
Etowah-------------------	B	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Urban land.										
WhB:										
Whitwell-----------------	C	Low								
			January	2.0-3.0	>6.0	---	---	None	Brief	Occasional
			February	2.0-3.0	>6.0	---	---	None	Brief	Occasional
			March	2.0-3.0	>6.0	---	---	None	Brief	Occasional
			April	2.0-3.0	>6.0	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	2.0-3.0	>6.0	---	---	None	Brief	Occasional

Table 20.—Soil Features

(See text for definitions of terms used in this table. Absence of an entry indicates that the feature is not a concern or that data were not estimated)

Map symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness		Uncoated steel	Concrete
		In				
AeC:						
Allen	---	---	---	None	Low	Moderate
AeD:						
Allen	---	---	---	None	Low	Moderate
AfD:						
Allen	---	---	---	None	Low	Moderate
Jefferson	Paralithic bedrock	40-60	---	None	Moderate	High
Urban land.						
AmC:						
Armuchee	Paralithic bedrock	20-36	Strongly cemented	None	Moderate	Moderate
AmD:						
Armuchee	Paralithic bedrock	20-36	Strongly cemented	None	Moderate	Moderate
AmE:						
Armuchee	Paralithic bedrock	20-36	Strongly cemented	None	Moderate	Moderate
ANS. Area not surveyed						
ApC:						
Apison	Paralithic bedrock	20-40	Moderately cemented	None	Moderate	Moderate
Sunlight	Paralithic bedrock	10-20	Moderately cemented	None	Low	High
ApF:						
Apison	Paralithic bedrock	20-40	Moderately cemented	None	Moderate	Moderate
Sunlight	Paralithic bedrock	10-20	Moderately cemented	None	Low	High
ASD. Ash disposal area						
BeF:						
Bethesda	---	---	---	None	Moderate	High
Mines pit.						
Bg:						
Bloomingdale	---	---	---	None	High	Low

Table 20.—Soil Features—Continued

Map symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness		Uncoated steel	Concrete
		In				
BrE:						
Bradyville	Lithic bedrock	40-60	Indurated	None	High	Moderate
Rock outcrop	Lithic bedrock	0-0	Indurated	None	---	---
CaB:						
Capshaw	Paralithic bedrock	71-76	Very strongly cemented	None	High	Moderate
CbD:						
Colbert	Lithic bedrock	40-60	Indurated	None	High	Moderate
Lyerly	Lithic bedrock	34-40	Indurated	None	High	Moderate
Rock outcrop	Lithic bedrock	0-0	Indurated	None	---	---
CoC:						
Collegedale	---	---	---	None	High	Moderate
CoD:						
Collegedale	---	---	---	None	High	Moderate
DeB:						
Dewey	---	---	---	None	High	Moderate
DeC:						
Dewey	---	---	---	None	High	Moderate
DeD:						
Dewey	---	---	---	None	Moderate	High
DeE:						
Dewey	---	---	---	None	High	Moderate
EcB:						
Ealy	---	---	---	None	Low	Moderate
Craigsville	---	---	---	None	Moderate	Moderate
EtB:						
Etowah	---	---	---	None	Low	Moderate
EtC:						
Etowah	---	---	---	None	Low	Moderate
FuB:						
Fullerton	---	---	---	None	High	Moderate
Pailo	---	---	---	None	Low	High
FuC:						
Fullerton	---	---	---	None	High	Moderate
Pailo	---	---	---	None	Low	High
FuD:						
Fullerton	---	---	---	None	High	Moderate
Pailo	---	---	---	None	Low	High

Table 20.—Soil Features—Continued

Map symbol and soil name	Restrictive layer: Kind	Restrictive layer: Depth to top	Restrictive layer: Hardness	Potential for frost action	Risk of corrosion: Uncoated steel	Risk of corrosion: Concrete
		In				
FuE:						
Fullerton	---	---	---	None	High	Moderate
Pailo	---	---	---	None	Low	High
FwD:						
Fullerton	---	---	---	None	High	Moderate
Dewey	---	---	---	None	Moderate	High
Urban land.						
FwE:						
Fullerton	---	---	---	None	High	Moderate
Dewey	---	---	---	None	High	Moderate
Urban land.						
GnD:						
Gilpin	Paralithic bedrock	20-40	Strongly cemented	None	Low	High
GpE:						
Gilpin	Paralithic bedrock	20-40	Strongly cemented	None	Low	High
Petros	Paralithic bedrock	10-20	Strongly cemented	None	Low	Moderate
GpF:						
Gilpin	Paralithic bedrock	20-40	Strongly cemented	None	Low	High
Petros	Paralithic bedrock	10-20	Strongly cemented	None	Low	Moderate
GsF:						
Gilpin	Paralithic bedrock	20-40	Strongly cemented	None	Low	High
Bouldin	---	---	---	None	Low	Moderate
Petros	Paralithic bedrock	10-20	Strongly cemented	None	Low	Moderate
Ha:						
Hamblen	---	---	---	None	Moderate	Moderate
HeB:						
Hendon	Fragipan	20-40	Noncemented	None	Low	Moderate
HeC:						
Hendon	Fragipan	20-40	Noncemented	None	Low	Moderate
JeC:						
Jefferson	Paralithic bedrock	40-60	---	None	Moderate	High

Table 20.—Soil Features—Continued

Map symbol and soil name	Restrictive layer: Kind	Restrictive layer: Depth to top	Restrictive layer: Hardness	Potential for frost action	Risk of corrosion: Uncoated steel	Risk of corrosion: Concrete
		In				
JeE:						
Jefferson	Paralithic bedrock	40-60	---	None	Moderate	High
JnD:						
Jefferson	Paralithic bedrock	40-60	---	None	Moderate	High
JnF:						
Jefferson	Paralithic bedrock	40-60	---	None	Moderate	High
LbB:						
Lily	Lithic bedrock	20-40	Indurated	None	Moderate	High
LbC:						
Lily	Lithic bedrock	20-40	Indurated	None	Moderate	High
LbD:						
Lily	Lithic bedrock	20-40	Indurated	None	Moderate	High
LgD:						
Lily	Lithic bedrock	20-40	Indurated	None	Moderate	High
Gilpin	Paralithic bedrock	20-40	Strongly cemented	None	Low	High
LgE:						
Lily	Lithic bedrock	20-40	Indurated	None	Moderate	High
Gilpin	Paralithic bedrock	20-40	Strongly cemented	None	Low	High
LmD:						
Lily	Lithic bedrock	20-40	Indurated	None	Moderate	High
Ramsey	Lithic bedrock	7-20	Indurated	None	Low	Moderate
LmE:						
Lily	Lithic bedrock	20-40	Indurated	None	Moderate	High
Ramsey	Lithic bedrock	7-20	Indurated	None	Low	Moderate
LoB:						
Lonewood	Paralithic bedrock	40-72	Strongly cemented	None	Low	Moderate
	Lithic bedrock	40-72	Indurated			
LoC:						
Lonewood	Paralithic bedrock	40-72	Strongly cemented	None	Low	Moderate
	Lithic bedrock	40-72	Indurated			
LP.						
Limestone quarry						
Me:						
Melvin	---	---	---	None	High	Low

Table 20.—Soil Features—Continued

Map symbol and soil name	Restrictive layer: Kind	Restrictive layer: Depth to top	Restrictive layer: Hardness	Potential for frost action	Risk of corrosion: Uncoated steel	Risk of corrosion: Concrete
		In				
MnC:						
Minvale	---	---	---	None	Moderate	Low
MoC:						
Montevallo	Paralithic bedrock	10-20	Strongly cemented	None	Moderate	Moderate
MoD:						
Montevallo	Paralithic bedrock	10-20	Strongly cemented	None	Moderate	Moderate
MoE:						
Montevallo	Paralithic bedrock	10-20	Strongly cemented	None	Moderate	Moderate
Pp:						
Pope	---	---	---	None	Low	High
Philo	---	---	---	None	Low	High
RaD:						
Ramsey	Lithic bedrock	7-20	Indurated	None	Low	Moderate
Rock outcrop	Lithic bedrock	0-0	Indurated	None	---	---
RaF:						
Ramsey	Lithic bedrock	7-20	Indurated	None	Low	Moderate
Rock outcrop	Lithic bedrock	0-0	Indurated	None	---	---
Sd:						
Shady	---	---	---	None	Low	Moderate
SfB:						
Shady	---	---	---	None	Low	Moderate
Swafford	Fragipan	18-36	Noncemented	None	Moderate	Moderate
Urban land.						
ShD:						
Shelocta	---	---	---	None	Low	High
SwB:						
Swafford	Fragipan	18-36	Noncemented	None	Moderate	Moderate
TaB:						
Tasso	Fragipan	18-36	Noncemented	None	Moderate	Moderate
TaC:						
Tasso	Fragipan	18-36	Noncemented	None	Moderate	Moderate
TeB2:						
Townley	Paralithic bedrock	20-40	Strongly cemented	None	Moderate	High
Coile	Paralithic bedrock	9-24	Moderately cemented	None	Moderate	Moderate

Table 20.—Soil Features—Continued

Map symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness		Uncoated steel	Concrete
		In				
TeC:						
Townley	Paralithic bedrock	20-40	Strongly cemented	None	Moderate	High
TeD:						
Townley	Paralithic bedrock	20-40	Strongly cemented	None	Moderate	High
TeE:						
Townley	Paralithic bedrock	20-40	Strongly cemented	None	Moderate	High
TuD:						
Townley	Paralithic bedrock	20-40	Strongly cemented	None	Moderate	High
Armuchee	Paralithic bedrock	20-36	Strongly cemented	None	Moderate	Moderate
Urban land.						
TuE:						
Townley	Paralithic bedrock	20-40	Strongly cemented	None	Moderate	High
Armuchee	Paralithic bedrock	20-36	Strongly cemented	None	Moderate	Moderate
Urban land.						
UrD.						
Urban land						
W.						
Water						
WaB:						
Waynesboro	---	---	---	None	High	High
WaC:						
Waynesboro	---	---	---	None	High	High
WaD:						
Waynesboro	---	---	---	None	High	High
WeD:						
Waynesboro	---	---	---	None	High	High
Etowah	---	---	---	None	Low	Moderate
Urban land.						
WhB:						
Whitwell	---	---	---	None	Moderate	Moderate

Table 21.—Taxonomic Classification of the Soils

(An asterisk in the first column indicates a taxadjunct to the series. See text for a description of those characteristics that are outside the range of the series)

Soil name	Family or higher taxonomic class
Allen	Fine-loamy, siliceous, semiactive, thermic Typic Paleudults
Apison	Fine-loamy, siliceous, semiactive, thermic Typic Hapludults
Armuchee	Fine, mixed, semiactive, thermic Inceptic Hapludults
Bethesda	Loamy-skeletal, mixed, active, acid, mesic Typic Udorthents
Bloomingdale	Fine, mixed, semiactive, nonacid, thermic Fluvaquentic Endoaquepts
Bouldin	Loamy-skeletal, siliceous, subactive, mesic Typic Paleudults
Bradyville	Fine, mixed, semiactive, thermic Typic Hapludalfs
Capshaw	Fine, mixed, semiactive, thermic Oxyaquic Hapludalfs
Coile	Loamy-skeletal, mixed, semiactive, thermic, shallow Ruptic-Ultic Dystrudepts
Colbert	Fine, smectitic, thermic Vertic Hapludalfs
Collegedale	Fine, mixed, semiactive, thermic Typic Paleudults
Craigsville	Loamy-skeletal, mixed, superactive, mesic Fluventic Dystrudepts
Dewey	Fine, kaolinitic, thermic Typic Paleudults
Ealy	Coarse-loamy, siliceous, semiactive, mesic Fluventic Dystrudepts
Etowah	Fine-loamy, siliceous, semiactive, thermic Typic Paleudults
Fullerton	Fine, kaolinitic, thermic Typic Paleudults
Gilpin	Fine-loamy, mixed, active, mesic Typic Hapludults
Hamblen	Fine-loamy, siliceous, semiactive, thermic Fluvaquentic Eutrudepts
Hendon	Fine-loamy, siliceous, semiactive, mesic Fragic Paleudults
Jefferson	Fine-loamy, siliceous, semiactive, mesic Typic Hapludults
Lily	Fine-loamy, siliceous, semiactive, mesic Typic Hapludults
Lonewood	Fine-loamy, siliceous, semiactive, mesic Typic Hapludults
Lyerly	Very fine, mixed, active, thermic Oxyaquic Vertic Hapludalfs
*Melvin	Fine-silty, mixed, active, nonacid, mesic Fluvaquentic Endoaquepts
Minvale	Fine-loamy, siliceous, subactive, thermic Typic Paleudults
Montevallo	Loamy-skeletal, mixed, subactive, thermic, shallow Typic Dystrudepts
Pailo	Loamy-skeletal, siliceous, semiactive, thermic Typic Paleudults
Petros	Loamy-skeletal, mixed, semiactive, mesic, shallow Typic Dystrudepts
Philo	Coarse-loamy, mixed, active, mesic Fluvaquentic Dystrudepts
Pope	Coarse-loamy, mixed, active, mesic Fluventic Dystrudepts
Ramsey	Loamy, siliceous, subactive, mesic Lithic Dystrudepts
Shady	Fine-loamy, mixed, subactive, thermic Typic Hapludults
Shelocta	Fine-loamy, mixed, active, mesic Typic Hapludults
Sunlight	Loamy-skeletal, mixed, semiactive, thermic, shallow Inceptic Hapludults
Swafford	Fine-loamy, siliceous, semiactive, thermic Fragiaquic Paleudults
Tasso	Fine-loamy, siliceous, semiactive, thermic Fragic Paleudults
Townley	Fine, mixed, semiactive, thermic Typic Hapludults
Waynesboro	Fine, kaolinitic, thermic Typic Paleudults
Whitwell	Fine-loamy, siliceous, semiactive, thermic Aquic Hapludults

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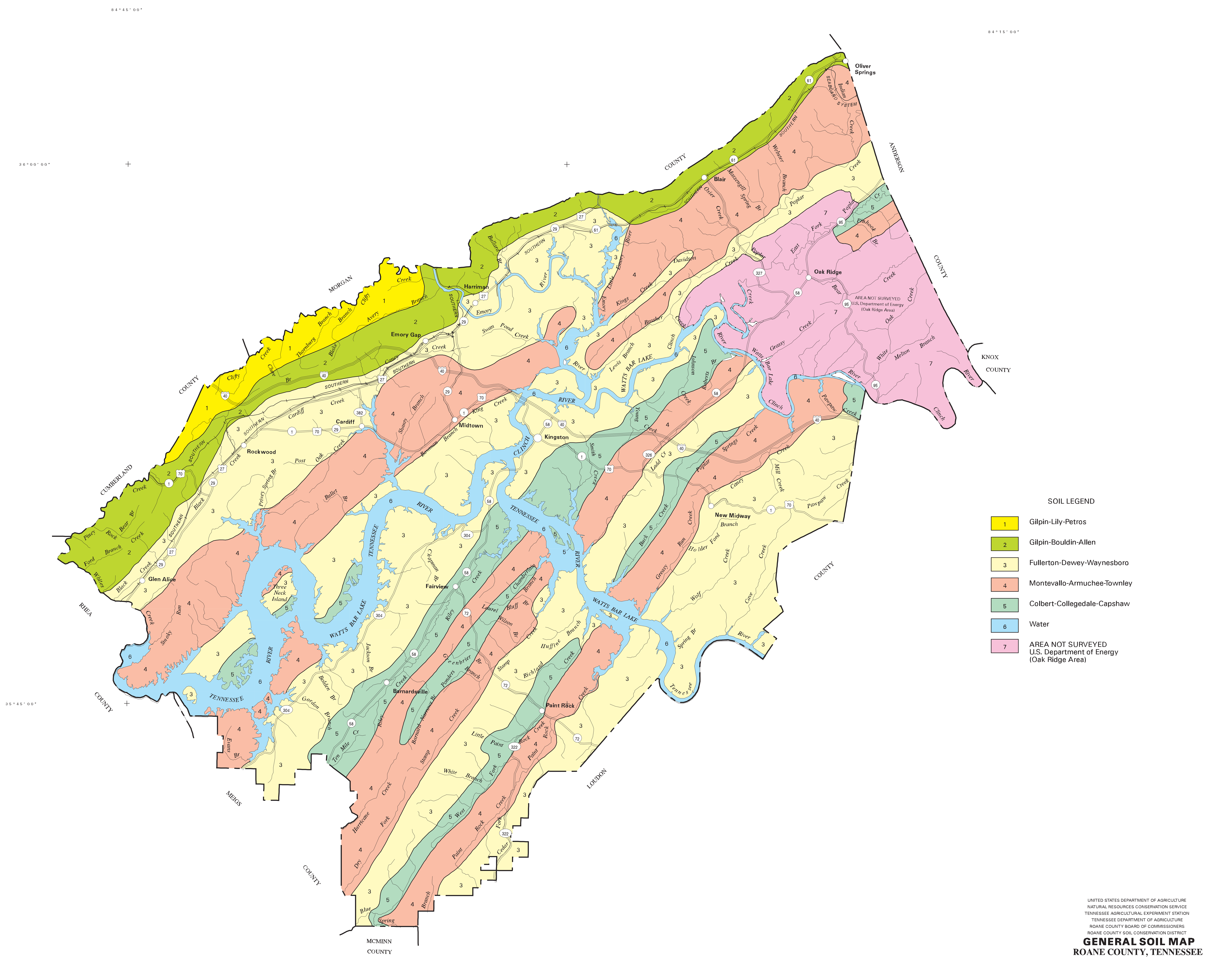


SOIL LEGEND

1	Gilpin-Lily-Petros
2	Gilpin-Bouldin-Allen
3	Fullerton-Dewey-Waynesboro
4	Montevallo-Armuchee-Townley
5	Colbert-Collegedale-Capshaw
6	Water
7	AREA NOT SURVEYED U.S. Department of Energy (Oak Ridge Area)

UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE
TENNESSEE AGRICULTURAL EXPERIMENT STATION
TENNESSEE DEPARTMENT OF AGRICULTURE
ROANE COUNTY BOARD OF COMMISSIONERS
ROANE COUNTY SOIL CONSERVATION DISTRICT

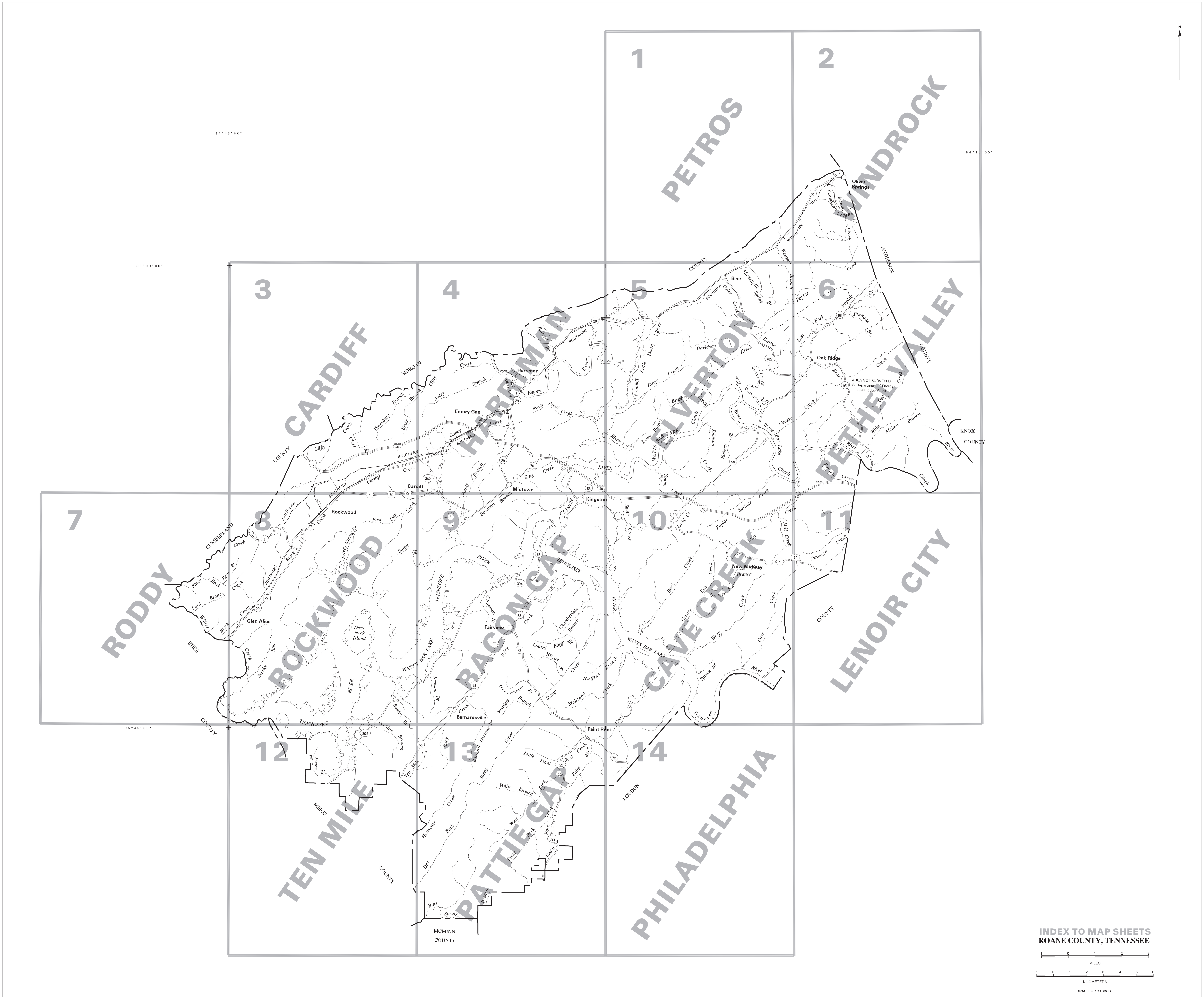
GENERAL SOIL MAP
ROANE COUNTY, TENNESSEE

MILES

KILOMETERS

SCALE = 1:110000

Each area outlined on this map consists of more than one kind of soil. The map is thus meant for general planning rather than a basis for decisions on the use of specific tracts.


1 PETROS
2 WINDROCK
3 CARDIFF
4 HARRIMAN
5 ELVERTON
6 BETHEL VALLEY
7 RODDY
8 ROCKWOOD
9 BACON GAP
10 CAVE CREEK
11 LENOIR CITY
12 TEN MILE
13 PATTIE GAP
14 PHILADELPHIA
Oliver Springs
Blair
Oak Ridge
AREA NOT SURVEYED U.S. Department of Energy (Oak Ridge Area)
Harriman
Emory Gap
Cardiff
Midtown
Kingston
Rockwood
Glen Alice
Three Neck Island
Fairview
New Midway
Barnardsville
Paint Rock
MORGAN COUNTY
ANDERSON COUNTY
KNOX COUNTY
CUMBERLAND COUNTY
RHEA COUNTY
MEIGS COUNTY
MCMINN COUNTY
LOUDON COUNTY
WATTS BAR LAKE
TENNESSEE RIVER
CLINCH RIVER
EMORY RIVER
84°45'00"
84°15'00"
36°00'00"
35°45'00"
INDEX TO MAP SHEETS
ROANE COUNTY, TENNESSEE
MILES
KILOMETERS
SCALE = 1:110000

UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

ROANE COUNTY, TENNESSEE

TENNESSEE AGRICULTURAL EXPERIMENT STATION
TENNESSEE DEPARTMENT OF AGRICULTURE
ROANE COUNTY BOARD OF COMMISSIONERS
ROANE COUNTY SOIL CONSERVATION DISTRICT

SOIL LEGEND

Map unit symbols are listed in alphabetical order. Map symbols consist of letters or a combination of letters and numbers. The first letter is capitalized and is the first letter of the series name (or the name of the higher classification or miscellaneous area). The second letter is lowercase. The third letter is capitalized and indicates the class of slope. Some map units on nearly level (0 to 3 percent) slopes do not have a letter in the map unit designating slope.

SYMBOL	NAME	SYMBOL	NAME
AeC	Allen loam, 5 to 12 percent slopes	JnD	Jefferson cobbly loam, 12 to 20 percent slopes
AeD	Allen loam, 12 to 20 percent slopes	JnF	Jefferson cobbly loam, 20 to 50 percent slopes
AfD	Allen-Jefferson-Urban land complex, 5 to 20 percent slopes	LbB	Lily loam, 2 to 5 percent slopes
AmC	Armuchee silt loam, 5 to 12 percent slopes	LbC	Lily loam, 5 to 12 percent slopes
AmD	Armuchee silt loam, 12 to 20 percent slopes	LbD	Lily loam, 12 to 20 percent slopes
AmE	Armuchee silt loam, 20 to 35 percent slopes	LgD	Lily-Gilpin complex, 12 to 20 percent slopes
ANS	Area not surveyed, access denied	LgE	Lily-Gilpin complex, 20 to 35 percent slopes
ApC	Apison-Sunlight complex, 5 to 12 percent slopes	LmD	Lily-Ramsey complex, 12 to 20 percent slopes
ApF	Apison-Sunlight complex, 25 to 60 percent slopes, very rocky	LmE	Lily-Ramsey complex, 20 to 35 percent slopes
ASD	Ash Disposal Area	LoB	Lonewood silt loam, 2 to 5 percent slopes
BeF	Bethesda-Mines pit complex, 10 to 80 percent slopes	LoC	Lonewood silt loam, 5 to 12 percent slopes
Bg	Bloomingdale silty clay loam, occasionally flooded	LP	Limestone Quarry
BrE	Bradyville-Rock outcrop complex, 5 to 25 percent slopes	Me	Melvin silt loam, frequently flooded
CaB	Capshaw silt loam, 2 to 5 percent slopes	MnC	Minvale gravelly silt loam, 5 to 12 percent slopes
CbD	Colbert-Lyerly-Rock outcrop complex, 5 to 20 percent slopes	MoC	Montevallo channery silt loam, 5 to 12 percent slopes
CoC	Collegedale silt loam, 5 to 12 percent slopes	MoD	Montevallo channery silt loam, 12 to 20 percent slopes
CoD	Collegedale silt loam, 12 to 20 percent slopes	MoE	Montevallo channery silt loam, 20 to 35 percent slopes
DeB	Dewey silt loam, 2 to 5 percent slopes	Pp	Pope-Philo complex, frequently flooded
DeC	Dewey silt loam, 5 to 12 percent slopes	RaD	Ramsey-Rock Outcrop complex, 12 to 20 percent slopes
DeD	Dewey silt loam, 12 to 20 percent slopes	RaF	Ramsey-Rock Outcrop complex, 20 to 50 percent slopes
DeE	Dewey silt loam, 20 to 45 percent slopes	Sd	Shady loam, occasionally flooded
EcB	Ealy-Craigsville complex, rarely flooded	SfB	Shady-Swafford-Urban land complex, 2 to 5 percent slopes
EtB	Etowah loam, 2 to 5 percent slopes	ShD	Shelocta silt loam, 12 to 20 percent slopes
EtC	Etowah silt loam, 5 to 12 percent slopes	SwB	Swafford loam, 2 to 5 percent slopes
FuB	Fullerton-Pailo complex, 2 to 5 percent slopes	TaB	Tasso loam, 2 to 5 percent slopes
FuC	Fullerton-Pailo complex, 5 to 12 percent slopes	TaC	Tasso loam, 5 to 12 percent slopes
FuD	Fullerton-Pailo complex, 12 to 20 percent slopes	TeB2	Townley-Coile complex, 2 to 5 percent slopes, eroded
FuE	Fullerton-Pailo complex, 20 to 35 percent slopes	TeC	Townley silt loam, 5 to 12 percent slopes
FwD	Fullerton-Dewey-Urban land complex, 5 to 20 percent slopes	TeD	Townley silt loam, 12 to 20 percent slopes
FwE	Fullerton_Dewey-Urban land complex, 20 to 35 percent slopes	TeE	Townley silt loam, 20 to 35 percent slopes
GnD	Gilpin silt loam, 12 to 20 percent slopes	TuD	Townley-Armuchee-Urban land complex, 5 to 20 percent slopes
GpE	Gilpin-Petros complex, 20 to 35 percent slopes	TuE	Townley-Armuchee-Urban land complex, 20 to 35 percent slopes
GpF	Gilpin-Petros complex, 35 to 80 percent slopes	UrD	Urban land, 5 to 20 percent slopes
GsF	Gilpin-Bouldin-Petros complex, 25 to 80 percent slopes, very stony	W	Water
Ha	Hamblen silt loam, occasionally flooded	WaB	Waynesboro loam, 2 to 5 percent slopes
HeB	Hendon silt loam, 2 to 5 percent slopes	WaC	Waynesboro loam, 5 to 12 percent slopes
HeC	Hendon silt loam, 5 to 12 percent slopes	WaD	Waynesboro loam, 12 to 20 percent slopes
JeC	Jefferson loam, 5 to 12 percent slopes	WeD	Waynesboro-Etowah-Urban land complex, 5 to 20 percent slopes
JeE	Jefferson loam, 12 to 35 percent slopes	WhB	Whitwell loam, 1 to 4 percent slopes, occasionally flooded

CONVENTIONAL AND SPECIAL SYMBOLS LEGEND

CULTURAL FEATURES

BOUNDARIES

- National, state, or province
- County or parish
- Minor civil division
- Reservation (national forest or park, state forest or park, and large airport)
- Land grant
- Limit of soil survey (label)
- Field sheet matchline and neatline

AD HOC BOUNDARY (label) — Davis Airstrip

- Small airport, airfield, park, oilfield, cemetery, or flood pool — FLOOD POOL LINE

STATE COORDINATE TICK
1 890 000 FEET

LAND DIVISION CORNER (sections and land grants)

ROADS

- Divided (median shown if scale permits)
- Other roads
- Trail

ROAD EMBLEM AND DESIGNATIONS

- Interstate — 173
- Federal — 287
- State — 52
- County, farm or ranch — 1283

RAILROAD

POWER TRANSMISSION LINE

PIPELINE

FENCE

LEVEES

- Without road
- With road
- With railroad

DAMS

- Large (to scale)
- Medium or Small (Named where applicable) — water / w

PITS

- Gravel pit
- Mine or quarry

CULTURAL FEATURES

MISCELLANEOUS CULTURAL FEATURES

- Farmstead, house (occupied)
- Church
- School
- Indian mound (label) — Indian Mound
- Located object (label) — Tower
- Tank (label) — Gas
- Wells, oil or gas
- Windmill
- Kitchen midden

WATER FEATURES

DRAINAGE

- Perennial drain, double line
- Perennial drain, single line — Label only
- Intermittent drain — Label only
- Drainage end — Label only
- Canals or ditches — Label only
- Double-line (label) — CANAL
- Drainage and/or irrigation — Label only

LAKES, PONDS AND RESERVOIRS

- Perennial — water / w
- Intermittent — int / i

MISCELLANEOUS WATER FEATURES

- Marsh or swamp
- Spring
- Well, artesian
- Well, irrigation
- Wet spot

SPECIAL SYMBOLS FOR SOIL SURVEY

SOIL DELINEATIONS AND SYMBOLS — ArA DkB

- Bedrock escarpment (points downslope)
- Other than bedrock escarpment (points downslope)
- Short steep slope
- Gully
- Depression or sink
- Soil sample

MISCELLANEOUS

- Blowout
- Clay spot
- Gravelly spot
- Gumbo, slick or scabby spot (sodic)
- Dumps and other similar nonsoil areas
- Prominent hill or peak
- Rock outcrop (includes sandstone and shale)
- Saline spot
- Sandy spot
- Severely eroded spot
- Slide or slip (tips point upslope)
- Stony spot, very stony spot

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1992-1997 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUADRANGLE LOCATION

SCALE 1:24000

MILES

FEET

KILOMETERS

		2	2 WINDROCK
4	5	6	4 HARRIMAN 5 ELVERTON 6 BETHEL VALLEY

INDEX TO ADJOINING 7.5 MAPS

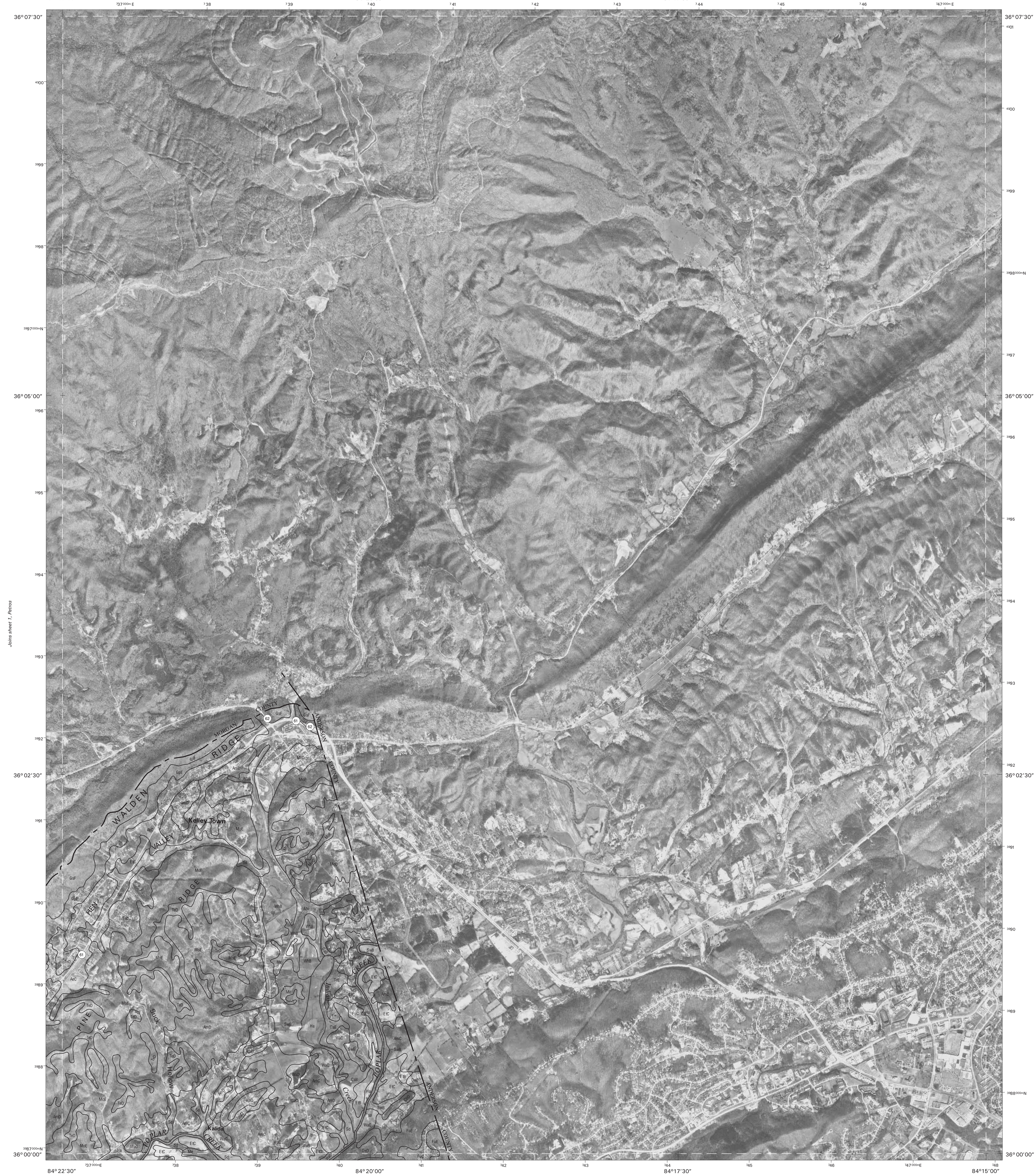
PETROS, TENNESSEE

7.5 MINUTE SERIES
SHEET NUMBER 1 OF 14

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

ROANE COUNTY, TENNESSEE
WINDROCK QUADRANGLE
SHEET NUMBER 2 OF 14



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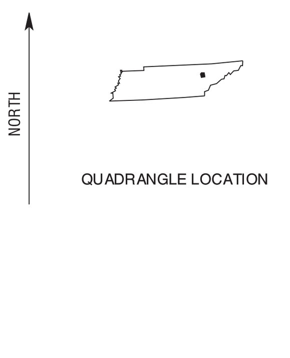
North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



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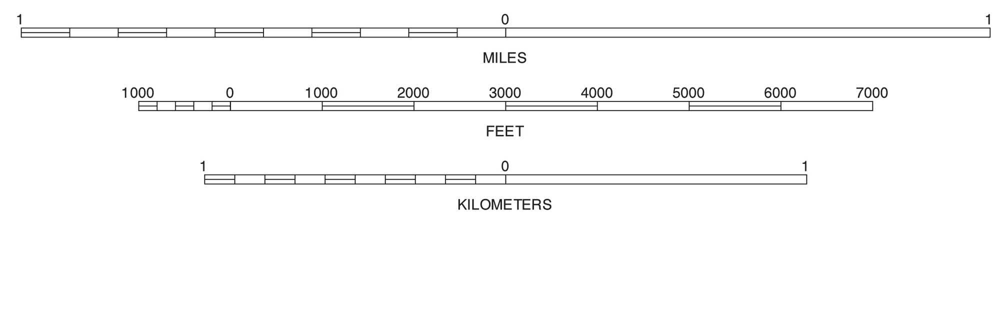

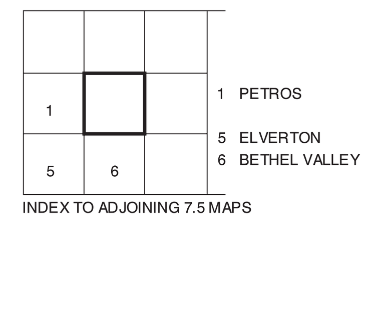

WINDROCK, TENNESSEE
7.5 MINUTE SERIES
SHEET NUMBER 2 OF 14

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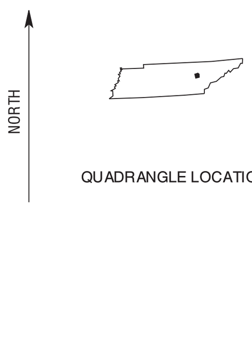

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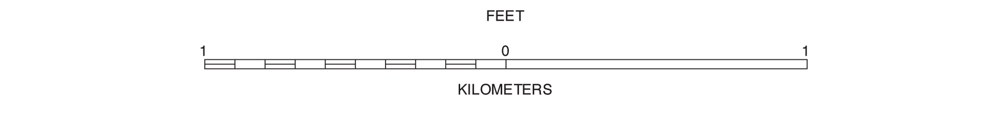

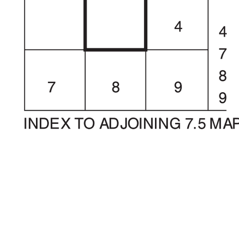

CARDIFF, TENNESSEE
7.5 MINUTE SERIES
SHEET NUMBER 3 OF 14

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

ROANE COUNTY, TENNESSEE
HARRIMAN QUADRANGLE
SHEET NUMBER 4 OF 14

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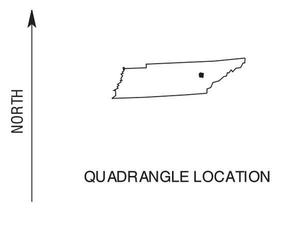
North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



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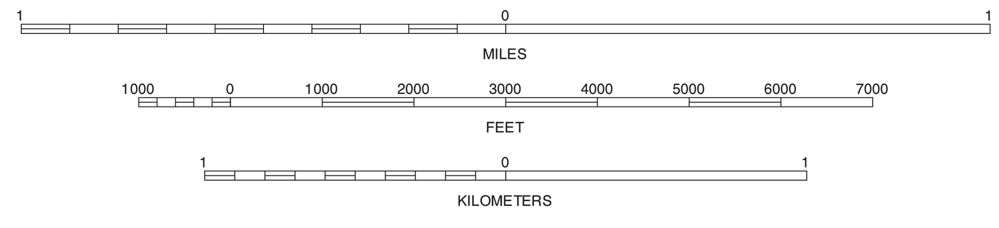
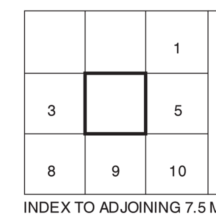




1 PETROS
3 CARDIFF
5 ELVERTON
8 ROCKWOOD
9 BACON GAP
10 CAVE CREEK

INDEX TO ADJOINING 7.5 MAPS

HARRIMAN, TENNESSEE

7.5 MINUTE SERIES
SHEET NUMBER 4 OF 14

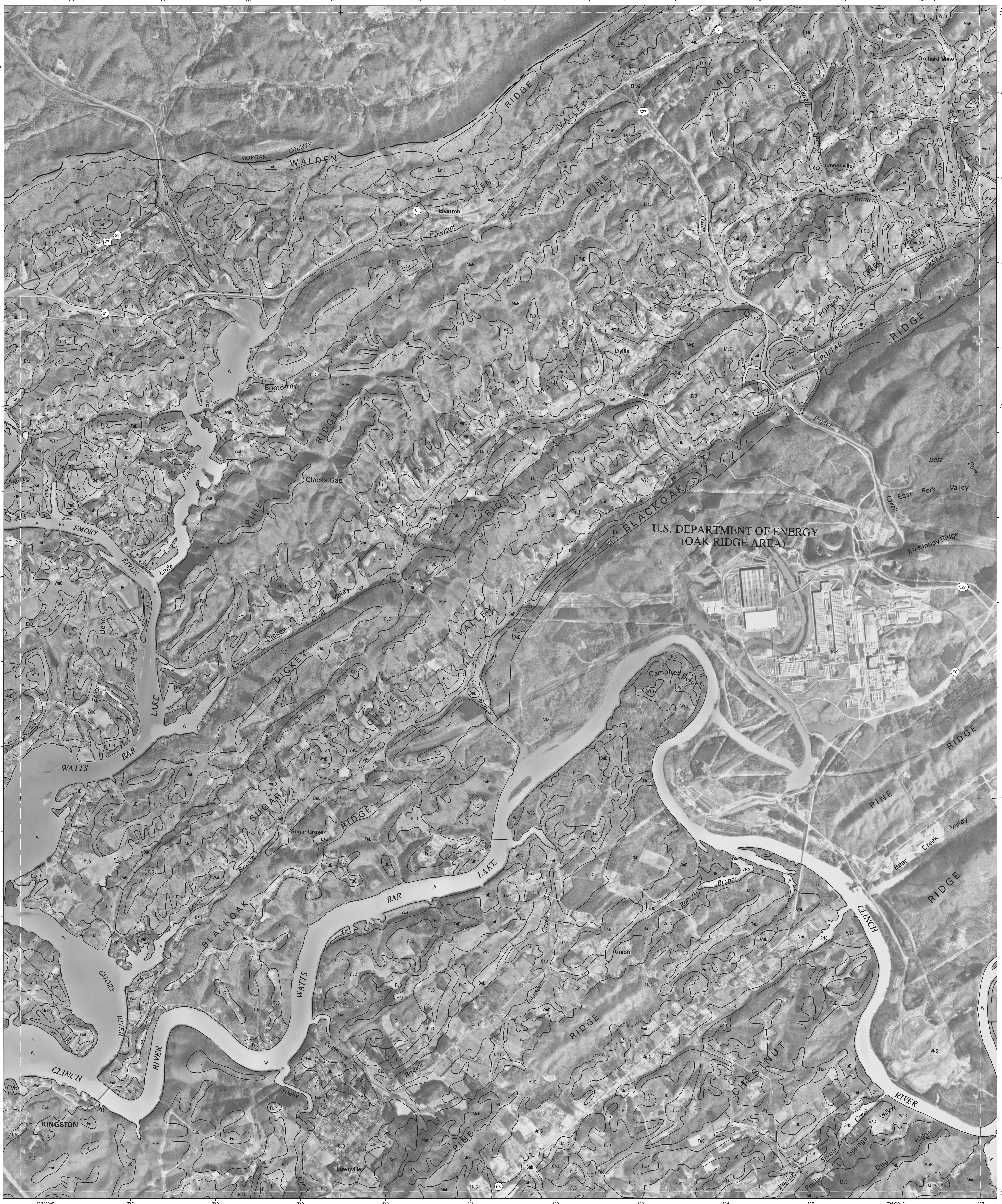
Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

Joins sheet 1, Petros

Joins sheet 2, Windrock

84° 30'00" 84° 27'30" 84° 25'00" 84° 22'30"

36° 00'00" 35° 57'30" 35° 55'00" 35° 52'30"



Joins sheet 4, Harriman

Joins sheet 6, Bethel Valley

Joins sheet 9, Bacon Gap

Joins sheet 10, Cave Creek

Joins sheet 11, Lenoir City

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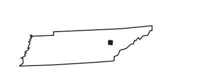
North American Datum of 1983 (NAD83), GRS-80 Spheroid
1000-meter ticks: Universal Transverse Mercator, zone 16.
Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH



QUADRANGLE LOCATION

SCALE 1:24000

MILES

FEET

KILOMETERS

	1	2
4		6
9	10	11

1 PETROS
2 WINDROCK
4 HARRIMAN
6 BETHEL VALLEY
9 BACON GAP
10 CAVE CREEK
11 LENOIR CITY

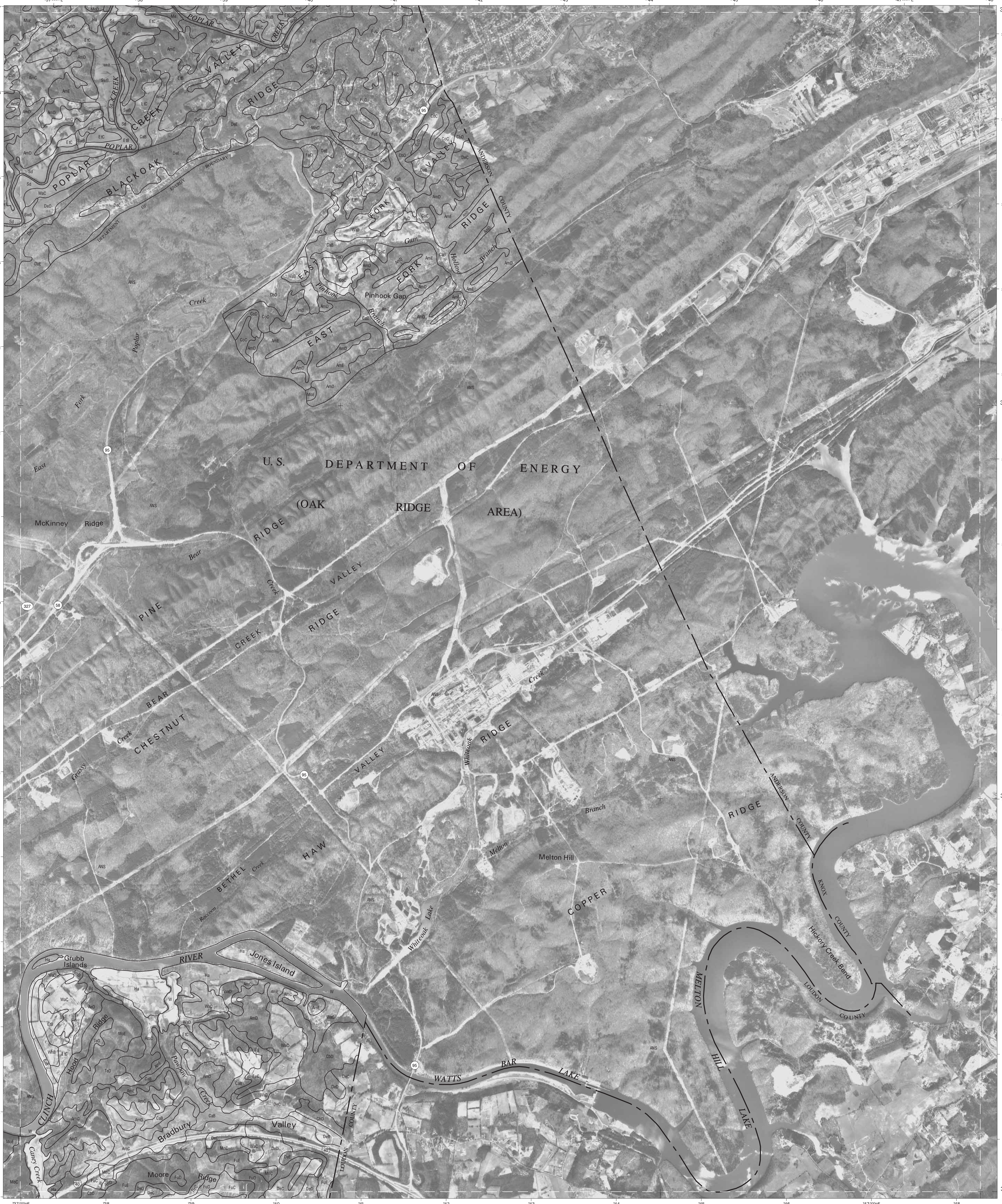
INDEX TO ADJOINING 7.5 MAPS

ELVERTON, TENNESSEE
7.5 MINUTE SERIES
SHEET NUMBER 5 OF 14

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

ROANE COUNTY, TENNESSEE
BETHEL VALLEY QUADRANGLE
SHEET NUMBER 6 OF 14



Joins sheet 11, Lenoir City

SCALE 1:24000

MILES

FEET

KILOMETERS

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUADRANGLE LOCATION

1 PETROS
2 WINDROCK
5 ELVERTON
10 CAVE CREEK
11 LENOIR CITY

INDEX TO ADJOINING 7.5 MAPS

BETHEL VALLEY, TENNESSEE
7.5 MINUTE SERIES
SHEET NUMBER 6 OF 14

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UNITED STATES
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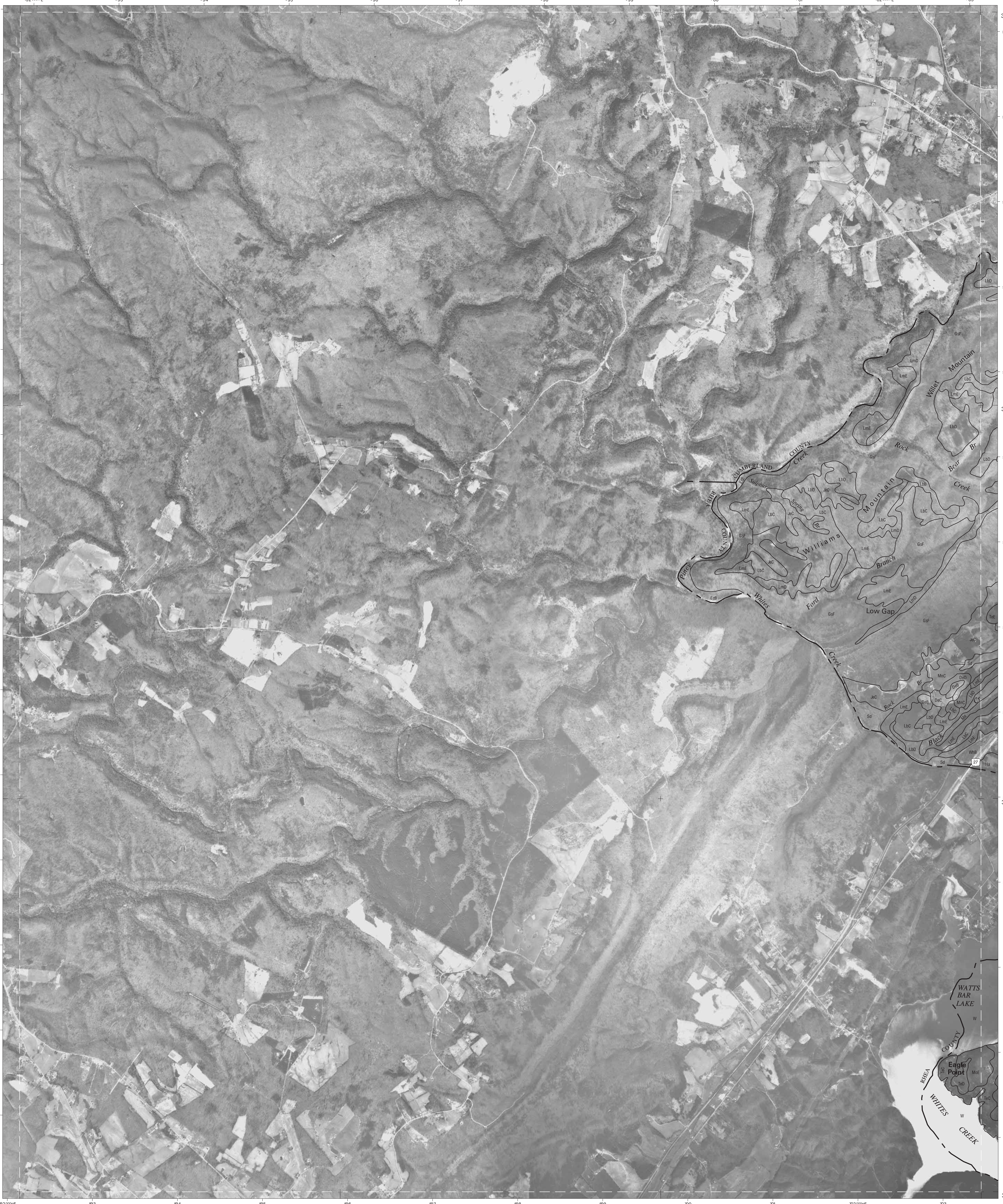
NATURAL RESOURCES CONSERVATION SERVICE

ROANE COUNTY, TENNESSEE
RODDY QUADRANGLE
SHEET NUMBER 7 OF 14



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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUADRANGLE LOCATION

SCALE 1:24000

MILES

FEET

KILOMETERS

3 CARDIFF
8 ROCKWOOD
12 TEN MILE

INDEX TO ADJOINING 7.5 MAPS

RODDY, TENNESSEE
7.5 MINUTE SERIES
SHEET NUMBER 7 OF 14

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ROANE COUNTY, TENNESSEE
ROCKWOOD QUADRANGLE
SHEET NUMBER 8 OF 14

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NORTH

QUADRANGLE LOCATION

SCALE 1:24000

MILES

FEET

KILOMETERS

	3	4
7		9
	12	13

3 CARDIFF
4 HARRIMAN
7 RODDY
9 BACON GAP
12 TEN MILE
13 PATTIE GAP

INDEX TO ADJOINING 7.5 MAPS

ROCKWOOD, TENNESSEE
7.5 MINUTE SERIES
SHEET NUMBER 8 OF 14

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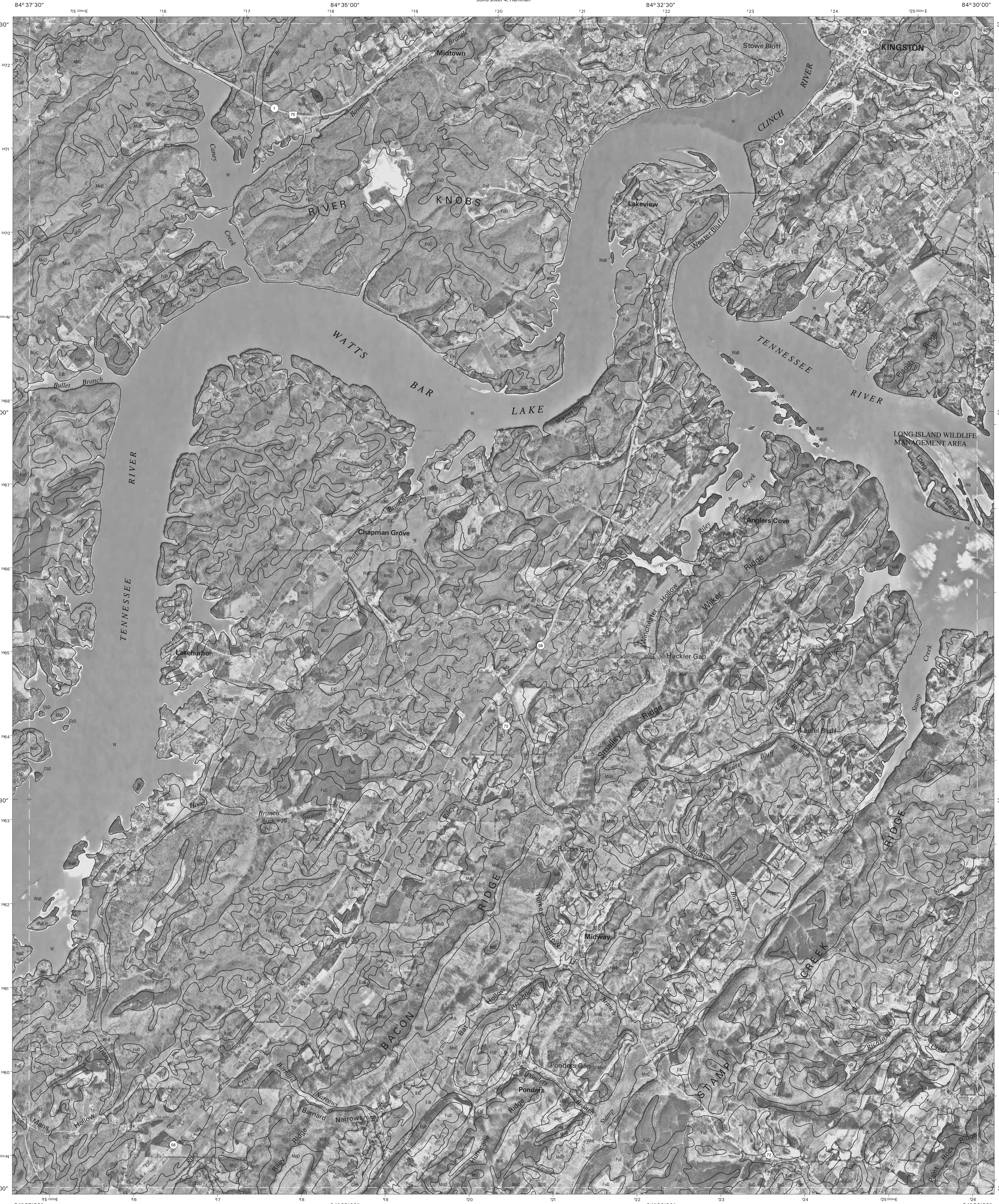
UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

ROANE COUNTY, TENNESSEE
BACON GAP QUADRANGLE
SHEET NUMBER 9 OF 14

Joins sheet 3, Cardiff

Joins sheet 4, Harriman

Joins sheet 5, Elverton



Joins sheet 8, Rockwood

Joins sheet 10, Cave Creek

Joins sheet 12, Ten Mile

Joins sheet 13, Pattie Gap

Joins sheet 14, Philadelphia

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NORTH

QUADRANGLE LOCATION

SCALE 1:24000

MILES

FEET

KILOMETERS

3	4	5
8		10
12	13	14

3 CARDIFF
4 HARRIMAN
5 ELVERTON
8 ROCKWOOD
10 CAVE CREEK
12 TEN MILE
13 PATTIE GAP
14 PHILADELPHIA

INDEX TO ADJOINING 7.5 MAPS

BACON GAP, TENNESSEE
7.5 MINUTE SERIES
SHEET NUMBER 9 OF 14

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UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

ROANE COUNTY, TENNESSEE
CAVE CREEK QUADRANGLE
SHEET NUMBER 10 OF 14

Joins sheet 14, Philadelphia

SCALE 1:24000

MILES

FEET

KILOMETERS

NORTH

QUADRANGLE LOCATION

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4	5	6
9		11
13	14	

4 HARRIMAN
5 ELVERTON
6 BETHEL VALLEY
9 BACON GAP
11 LENOIR CITY
13 PATTIE GAP
14 PHILADELPHIA

INDEX TO ADJOINING 7.5 MAPS

CAVE CREEK, TENNESSEE
7.5 MINUTE SERIES
SHEET NUMBER 10 OF 14

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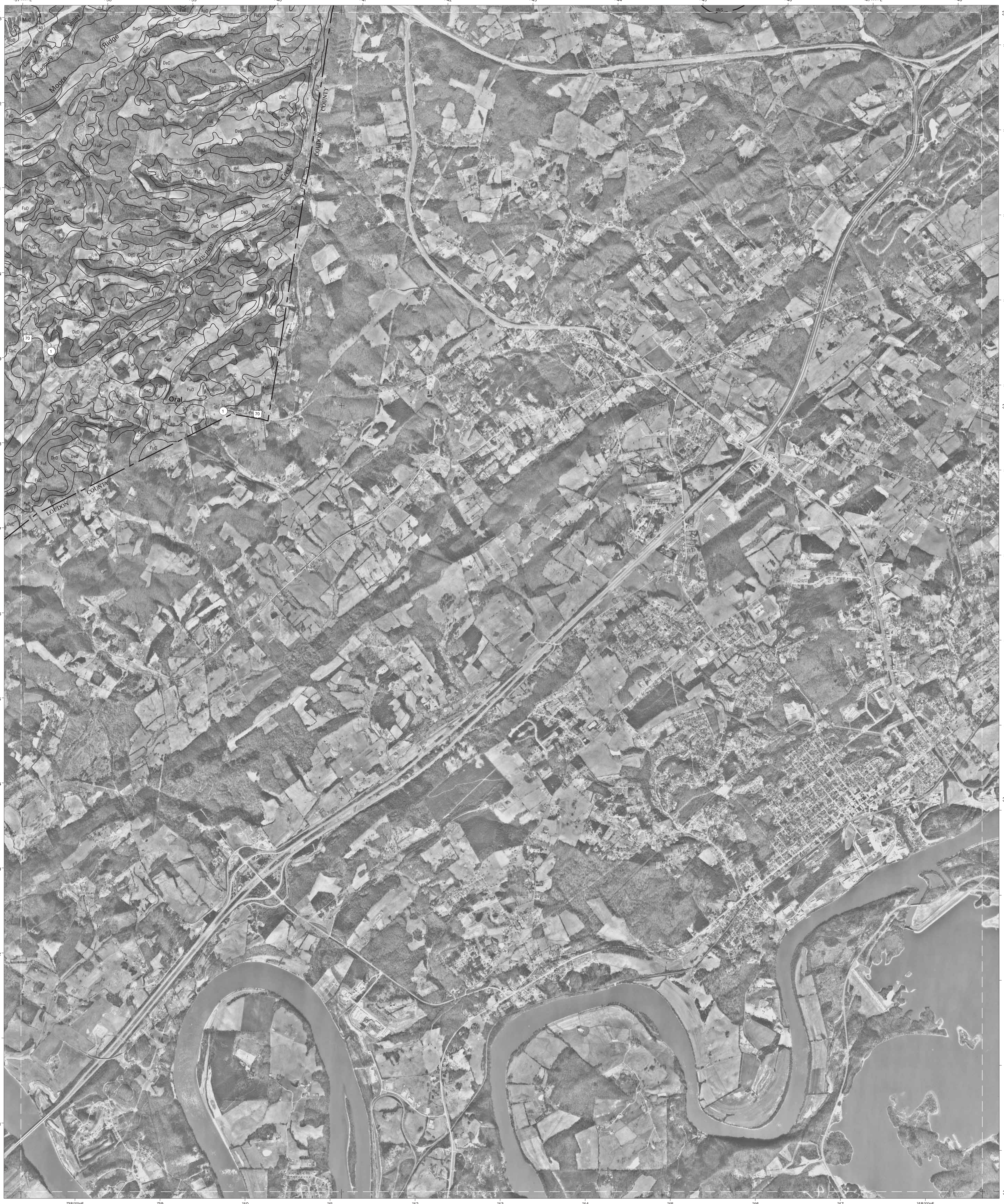
ROANE COUNTY, TENNESSEE
LENOIR CITY QUADRANGLE
SHEET NUMBER 11 OF 14



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NORTH

QUADRANGLE LOCATION

SCALE 1:24000

MILES

FEET

KILOMETERS

5	6	
10		
14		

5 ELVERTON
6 BETHEL VALLEY
10 CAVE CREEK
14 PHILADELPHIA

INDEX TO ADJOINING 7.5 MAPS

LENOIR CITY, TENNESSEE
7.5 MINUTE SERIES
SHEET NUMBER 11 OF 14

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UNITED STATES
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NATURAL RESOURCES CONSERVATION SERVICE

ROANE COUNTY, TENNESSEE
TEN MILE QUADRANGLE
SHEET NUMBER 12 OF 14

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NORTH

QUADRANGLE LOCATION

SCALE 1:24000

MILES

FEET

KILOMETERS

7 RODDY
8 ROCKWOOD
9 BACON GAP
13 PATTIE GAP

INDEX TO ADJOINING 7.5 MAPS

TEN MILE, TENNESSEE
7.5 MINUTE SERIES
SHEET NUMBER 12 OF 14

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UNITED STATES
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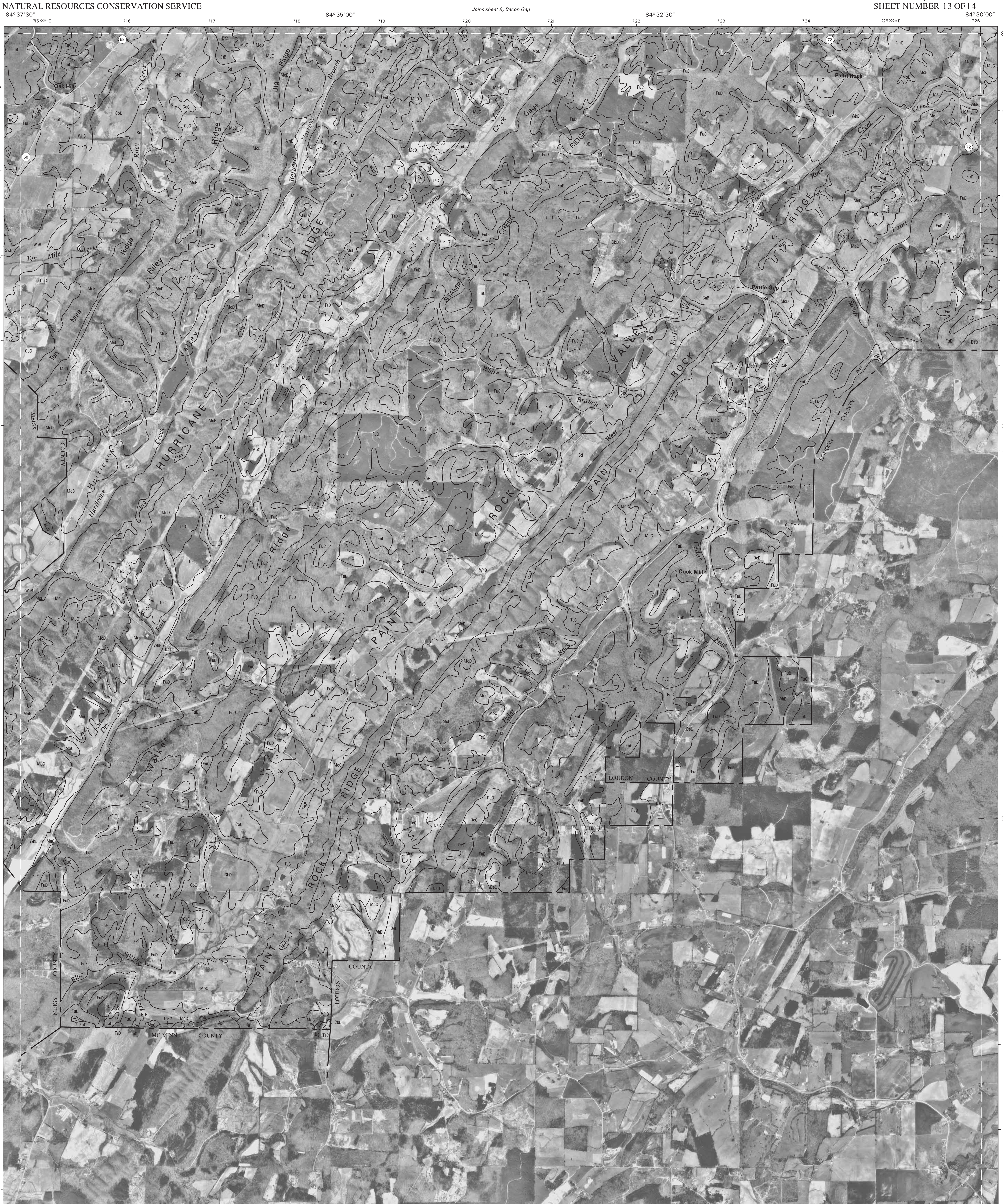
NATURAL RESOURCES CONSERVATION SERVICE

ROANE COUNTY, TENNESSEE
PATTIE GAP QUADRANGLE
SHEET NUMBER 13 OF 14



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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUADRANGLE LOCATION

SCALE 1:24000

MILES

FEET

KILOMETERS

8	9	10
12		14

8 ROCKWOOD
9 BACON GAP
10 CAVE CREEK
12 TEN MILE
14 PHILADELPHIA

INDEX TO ADJOINING 7.5 MAPS

PATTIE GAP, TENNESSEE
7.5 MINUTE SERIES
SHEET NUMBER 13 OF 14

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UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

ROANE COUNTY, TENNESSEE
PHILADELPHIA QUADRANGLE
SHEET NUMBER 14 OF 14

SCALE 1:24000

MILES

FEET

KILOMETERS

NORTH

QUADRANGLE LOCATION

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9	10	11
13		

9 BACON GAP
10 CAVE CREEK
11 LENOIR CITY
13 PATTIE GAP

INDEX TO ADJOINING 7.5 MAPS

PHILADELPHIA, TENNESSEE
7.5 MINUTE SERIES
SHEET NUMBER 14 OF 14

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